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From the Editor

DIVERSITY IN THE LANGUAGE CLASSROOM: RAISING AWARENESS

Access to education should be universal in all cases; however, bureaucracy and policy conventions sometimes divert unconsciously from this objective. Although educational institutions have been rowing in the right direction in the last decade, still a lot remains to be done to make education accessible to everyone.

Accessibility to education in most cases goes hand in hand with new technologies and the concept of e-learning accessibility (Phipps and Kelly 2006), since information and computer technologies (ICT) are present in all levels of the educational sphere. To achieve this, the European Union and governments worldwide have advanced in the publication of directives and requirements that advocate for equal access to education technology, for example access to websites and applications for the public sector. This means that education can be adapted to students' needs according to their functionality (Batanero et al. 2014).

The current issue includes contributions that delve into the educational sector with practices and pedagogical accommodations to students' needs. The issue, structured in two differentiating sections includes four full articles in the main section and two book reviews.

The issue opens with **Ögur Çelik**'s article on genre analysis applied to the field of ESP. The author explains how the digitalisation has resulted in the generation of new digital genres and their subsequent study. The article analyses biography texts on the Internet Movie Database (IMDb) website, the texts under analysis include biographies of the last 20 Oscar-Winning actors and actresses. Çelik proposes a genre-based instruction on EAP after the biography texts analysis.

The next article, written by **Anna Kuzio**, faces the problems of translating medical reports from English into Polish, taking into account language diversity. The analysis shows various linguistic difficulties when translating medical terms.

Next article is an attempt to provide useful professional training to students by gaining communicative competences. The authors, **Oksana Polyakova** and **Ruzana Galstyan-Sargsyanr**, depart from a students' needs analysis to deepen into an ESP course on technical and professional environments. They propose a scale for measuring training outcomes and provide some results from their piloting study emphasizing the importance of a customized syllabus.

Last full article, written by **James Rock**, presents a think-aloud protocol to explore vocabulary learning strategies of ten adult learners. Deliberate vocabulary learning tasks are studied. The results reveal some regular patterns of strategy use especially in strategies that require less mental effort. Less emphasis was also found on mechanical repetition.

In the Book and Multimedia Review section we can first read a detailed review done by **Dámaso Izquierdo Alegría** of the book *Disability and World Language Learning: Inclusive Teaching for Diverse Learners* by Sally S. Scott and Wade A. Edwards (2019). The book essentially explains the process of adopting inclusive instructional practices to address diverse students' needs.

In the review that follows, **Ana-Isabel Martínez-Hernández** revises the publication *Assistive Technology in Special Education: Resources to Support Literacy, Communication, and Learning Differences* by Joan L. Green Prufrock (2018). This book, addressed to teachers, schools, speech-language pathologists, therapists and also families is an attempt to explain how to use technologies to improve the learning process of physically and mentally challenged students in order to help them overcome learning difficulties.

I would like to close the editorial by thanking all the scholars that have collaborated in the peer-review process of the articles that make up this volume. Their time and work are very valuable and makes this journal possible. I am also grateful to the members of the *Language Value* Editorial Board and Book and Multimedia Review editors for their assistance.

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A Genre Analysis of Biography Texts on the IMDb Website

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ABSTRACT

Genre analysis is among the core areas of English for Specific Purposes (ESP) and has been gradually gaining importance because it offers clear, to-the-point and fruitful implications in the field of ESP. The radical increase in the digitalisation helped genre studies be more specific and accurate. The participation of users to the Web as the content writers maximised the specificity of genres and online communities started to form their own sub-genres. Biography texts represent an excellent example of this. This study aims to make a genre analysis of the biography texts on the Internet Movie Database (IMDb) website which were created by the members of an online community. The texts were chosen from the biographies of the last 20 Oscar-Winning actors and actresses, and a corpus was compiled. Casañ-Pitarch's (2017) Analysis of Multi-Genre Structures (AMS) model was adopted to analyse the texts. According to the analysis results, a genre-based instruction as a part of an English for General Academic Purposes course was proposed.

Keywords: *Genre, Genre Analysis, Biography Texts, Genre-Based Instruction, IMDB*

I. INTRODUCTION

Categorisation has always been an instinct endeavour of humanity towards complexity or chaos. The principal-agent of a categorisation process is the concept of genre. Classifying the kinds of texts based on their characteristics dates back to Ancient Greece, first practised by Aristotle (Beghtol 2001). In time, this process radically evolved from a classification mechanism to more complex, comprehensive and influential genre studies.

Although the concept of genre has ancient roots, genre studies can be regarded as relatively new and emerged as a natural outcome of English for Specific Purposes (ESP) studies. First introduced by Tarone (1981), genre studies owe its advent to the seminal work of Swales (1981). Since then, genre studies have been vigorously embraced by researchers and have turned out to be one of the focal points of ESP studies.

Regarded as a fruitful field of ESP studies which is mainly concerned with procedures and practical outcomes, genre analysis has evolved considerably with the contribution of prominent figures in ESP research (Swales 1990, Bhatia 1993, Berkenkotter &

Huckin 1993) and gained a more systematic nature with the help of genre analysis models (Swales 1990, Bhatia 1993, Casañ-Pitarch 2017). Another significant contribution to the development of genre analysis is the integration of computer-based tools which can be regarded as a milestone in genre studies. Regarding text analysis, computer-based tools led to more time-saving, to-the-point, practical and more straightforward analysis.

A crucial characteristic of genres is specificity. Principally, a genre analysis aims to scrutinise a specific text and draw specific conclusions. The level of this specificity is generally bound to the content, context, communicative purposes or discourse community. Furthermore, even a context-specific text may vary *per se* according to the discourse community. Biography texts constitute an excellent example of this. For instance, biography texts of actors and actresses on movie websites like IMDB and Fandango can be created in a different way since these websites offer different guidelines to their discourse communities to write biographies. In this respect, it can be put forward that genres are context and content-specific texts that serve for specific communicative purposes and belong to a specific discourse community.

In the light of these assumptions, this study set out to conduct a genre analysis on the biography texts of Oscar-winning actors and actresses on the IMDB website. IMDB is acknowledged as “the world’s most popular and authoritative movie and celebrity content source” (Press Room 2018). The content is created by the contributors, and the publication of the content requires a review process. Also, IMDB offers a guideline on how to, what to and how not to write the biographies. Celebrity biographies on IMDB can be regarded as a genre because (1) it has a framework on what to and how to write, (2) it has a specific discourse community (the contributors) and (3) the production of biography texts continues and seems to be continued in the future. For the analysis process, a corpus was compiled using the biography texts of the last 20 Oscar-winning actors and actresses and Casañ-Pitarch’s (2017) Analysis of Multi-Genre Structures (AMS) model for genre analysis was adopted. Detailed information related to AMS analysis model will be given in the methodology section. Lastly, a framework for Genre-Based Instruction on biography texts will be offered.

I.1. Biography Texts as a Genre

Biography is a nonfictional form of literature telling the life of an individual and regarded as one of the oldest forms of literary expression (Kendall 2018). Baud (2005) acknowledges that biography texts are the most specific textual genre of Ancient Egyptian culture. As such an old literary form, biography texts developed specific characteristics in time and gained historical, sociological, psychological, ethical and aesthetic aspects. Kendall (2018) draws attention to the difficulty in classifying the biography texts since they can easily shade into another, but a broad classification can be made on the basis of the source of knowledge as those written from personal knowledge and those from research. However, in a broad sense, biography texts can be classified as, but not limited to, critical biographies, standard biographies, interpretive biographies, fictionalised biographies and special purpose biographies. Biography writing is not only an individual endeavour but also attracts the attention of institutions and governmental organisations. Oxford Dictionary of National Biography, which includes over 60,000 biographies of people who shaped British history, serves as a good example of institutional perspective to biographies. Similarly, American National Biography includes over 19,000 biographies of people from American history written by prominent scholars.

The central focus of this study is on the biography texts of Oscar-Winning actors and actresses on IMDB. Askehave (1999) asserts that genres have basically two types of communicative purposes: official communicative purpose and hidden communicative purpose. In the official sense, the biographies on IMDB are created to inform the readers about the life events of actors/actresses including where the person grew up, who their parents were, which school they attended to, how they were discovered, what their debut and breakthrough were and so on. Since the biography texts on IMDB can be classified as informative biographies, the primary communicative purpose is to, simply, inform the reader about the person. On the other hand, it can be argued that biography texts on IMDB can serve for a 'hidden' communicative purpose. IMDB has two membership plans; IMDB and IMDB Pro. The former is free membership plan allowing access to basic information about the movies and the staff while the latter requires paid membership and offers comprehensive and expanded data for industry professionals. Biography texts act as the showcase of comprehensive data about actors

and actresses. In this respect, the hidden communicative purpose of the biographies on IMDB can be regarded as giving an insight into the comprehensive data and directing readers to IMDB Pro to access detailed information.

The biography texts on IMDB are written by the ‘contributors’. A contributor is anyone who submits information to the website (IMDb Contribution, 2018). It can be claimed that the contributors form the discourse community of biography texts on IMDB. Swales (1990) defines discourse communities as groups that have goals or purposes and use communication to achieve these goals and draws six characteristics of discourse communities. The first characteristic is that a discourse community has a broadly agreed set of public goals. In the contributor’s charter, the main goals of contributors are listed as (1) helping users make informed choices about what to see, (2) helping users discover titles they might not otherwise have found and (3) enriching users’ viewing experiences by providing information and content. The second characteristic is having a mechanism of intercommunication among the members. To enable intercommunication, IMDB provides a community zone for the contributors in which they can communicate with each other. The third one is using participatory mechanisms to provide information and feedback. The aforementioned community zone enables the contributors to ask questions, share ideas, get their problems solved and help others. The fourth characteristic is utilising one or more genres in the communicative furtherance of its aims. In this context, biography texts serve as the genre for the contributors with which they can fulfil community goals and maintain communication. The fifth characteristic is acquiring some specific lexis. Biography texts have a special form and cover a range of frequently used words that will be detailed in the analysis part. And the last characteristic of a discourse community is having a threshold level of members with a suitable degree of relevant content and discourse expertise. The contribution mechanism of IMDB is a very dynamic one including 21 badges for contributors determined according to their contribution level. As can be seen, the contributors reflect all the characteristics of a discourse community proposed by Swales (2011).

IMDB dictates guidelines (Biographical data guidelines 2019) that frame what to and what not to include in a biography text and highlights some concerns about style, wording and technical details. The contributors are expected to provide a broad, objective overview of the person in chronological order, avoiding subjective opinions.

Biographies should be in the English language and in the third person singular. Sentence structure should be preferred rather than a *résumé* format. Additionally, guidelines inform the contributors about the content that should be avoided in the biography texts. The contributors should avoid giving information about physical measurements (e.g. weight, height, clothing size etc.), personal details (e.g. sexual orientation, medical history, political views, and religion), and information about dating, rumours and gossips about the person. The guidelines serve as a clear-cut framework that make biography texts on IMBD a genre.

Analysis results of biography texts provide valuable information and insights for biography writers and EFL learners in that the analysis suggests a clear roadmap that simplifies the writing process. In this respect, this study set out to answer the following research question:

- (i) RQ-1: What are the microstructure and macrostructure features of biography texts at IMBD Website?

II. METHODOLOGY

This study aims to analyse the biography texts of actors and actresses at IMDB. For the sample size, 20 biography texts were chosen by filtering the last 20 Oscar-Winning actors and actresses. Since IMDB proposes a clear framework (biographical data guidelines), the texts are quite similar in macro and microstructure. However, it is likely that some biographies may have particular shortcomings. The reason why the biographies of Oscar-Winning actors and actresses were chosen is that these biographies meet all the criteria dictated in the biographical data guidelines. A corpus was compiled from 20 biography texts, and the texts were analysed quantitatively based on the Analysis of Multi-Genre Structures (AMS) model (Casañ-Pitarch 2017).

AMS model is based on the analysis models by Swales (1981) and Bhatia (1993) and is a combination of both. Casañ-Pitarch (2017) defines the purpose of the model as to analyse, describe and produce genres by analysing the oral and written discourse forms. The model comprises two main sections and 9 sub-sections to analyse data. The sections of the AMS model are shown in Table 1 below, and a detailed description of each section will be presented in the analysis part.

Table 1. Analysis Sections of AMS Model.

	Elements	Software
Macrostructure	Quantification of forms and structures	analyzemywriting.com
	Moves and steps forming the genre	Manuel analysis
Microstructure	Language Typology	Tropes Software
	Morphology	Tropes Software
	Formality, Readability and Lexical Density	analyzemywriting.com
	Terminology	analyzemywriting.com
	Verbal analysis	Tropes Software, Voyant Tools
	Analysis of personal pronouns	Tropes Software
	Syntax	Tropes Software
		Tropes Software

III. DATA ANALYSIS

AMS Model proposes an analysis procedure which consists of two sections and nine sub-sections. In this part, the analysis results of the data will be presented in accordance with the analysis steps of AMS Model.

III.1. Macrostructure

The primary focus of macrostructure analysis is on major forms and structures. These major forms and structures refer to the semantic structures related to the coherence and unity of the text (Van Dijk 1995) and concerns on meaning (Ruiz-Moneva 2011). AMS model offers two ways to analyse the macrostructure of a text: (1) Quantification of forms and structures and (2) Moves and steps forming the genre. In this section, the macrostructure of the biography texts on IMDB will be described and analysed under two sub-sections.

III.1.1. *Quantification of forms and structures*

This stage serves as a preliminary work for further analysis by focusing on the number of words, sentences and paragraphs in general and other frequency statistics in particular. Quantification analysis captures the frequency overview of the text (see Table 2). In this stage, the analysis is conducted via an online text analysis tool (analyzemywriting.com).

Table 2. Quantification of words, sentences, paragraphs, question marks and quotation marks

	Total Count	Average Per Text (/20)
Word Count	11610	581
Sentence Count	473	24
Paragraph count	131	7
Question Mark Count	1	-
Quotation Mark Count	130	7

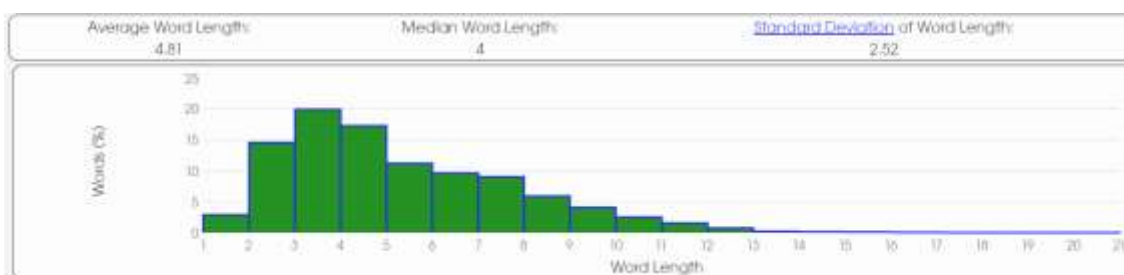


Figure 1. Word Lengths

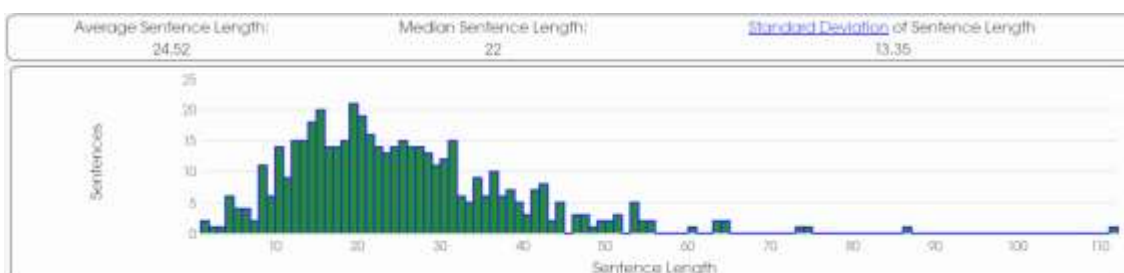


Figure 2. Sentence Lengths

III.1.2. Moves and steps forming the genre

In this part, rhetorical moves of the text and the steps are identified. Swales (1990) defines the rhetorical moves as the parts of the texts that correspond to a communicative purpose, and each move has specific steps that function as the components of the moves. In this context, the rhetorical moves and the steps of the biography texts on IMDB are identified in Table 3.

Table 3. The Moves and Steps in the Biography Texts on IMDB

Moves	Steps	Descriptions	Codes
Move 1		STARTING WITH A LOGLINE	L
Move 2		GIVING INFORMATION ABOUT EARLY LIFE	EL
	Step 1	Giving information about the birthdate and birthplace	EL1
	Step 2	Describing the person's family	EL2
	Step 3	Describing the person's childhood	EL3
	Step 4	Describing the person's education	EL4
Move 3		GIVING INFORMATION ABOUT HIS/HER CAREER	C
	Step 1	Giving information about how s/he started his/her career	C1
	Step 2	Identifying his/her debut work	C2
	Step 3	Giving information about his/her breakthrough	C3
	Step 4	Listing significant movies s/he acted	C4
	Step 5	Listing the significant nominations/awards in his/her career	C5
Move 4		GIVING INFORMATION ABOUT HIS/HER PERSONAL LIFE	PL
	Step 1	Presenting interesting facts about his/her life	PL1
	Step 2	Describing the person's personality	PL2
	Step 3	Describing the person's physical appearance	PL3

These moves and steps constitute the conveyors of communicative purposes in biography texts on IMDB. Primarily, the texts are composed of the moves and steps above, but the sequence of the moves differs according to the writers' style and preference. The variety in the sequence of moves and steps are illustrated in Table 4.

Table 4. The Variances of Move Sequences

BIOGRAPHY TEXT	MOVE AND STEP SEQUENCES												
Frances McDormand	EL1	EL2	EL4	C1	C3	C2	PL2	C5	PL1				
Gary Oldman	L	PL1	EL1	EL2	EL4	C1	C2	C5	C4	C3	PL1	C5	
Casey Affleck	L	EL1	C3	C4									
Emma Stone	EL1	EL2	C1	C2	PL1	C3							
Leonardo DiCaprio	L	EL1	EL2	C1	C2	C3	C4	PL1	PL2				
Brie Larson	L	C1	C3	C4	PL1								
Eddie Redmayne	L	EL1	EL2	EL4	C1	C2	C3	C4	C5				
Julianne Moore	EL1	EL2	EL4	C1	C2	C3	C4	C5					
Matthew McConaughey	EL1	EL2	C1	C4	C5								
Cate Blanchett	EL1	EL2	EL4	C2	C4	C5	PL1						

Daniel Day-Lewis	<i>EL1</i>	<i>EL2</i>	<i>EL4</i>	<i>C2</i>	<i>C1</i>	<i>C4</i>	<i>C5</i>			
Jennifer Lawrence	<i>L</i>	<i>EL1</i>	<i>EL2</i>	<i>C1</i>	<i>C2</i>	<i>C5</i>	<i>C4</i>			
Meryl Streep	<i>C5</i>	<i>EL1</i>	<i>EL2</i>	<i>EL4</i>	<i>C1</i>	<i>C5</i>	<i>C4</i>			
Colin Firth	<i>EL1</i>	<i>EL2</i>	<i>EL3</i>	<i>PL1</i>	<i>C1</i>	<i>C5</i>				
Natalie Portman	<i>L</i>	<i>EL1</i>	<i>EL2</i>	<i>EL3</i>	<i>EL4</i>	<i>C1</i>	<i>C2</i>	<i>C3</i>	<i>C4</i>	<i>C5</i>
Jeff Bridges	<i>EL1</i>	<i>EL2</i>	<i>EL3</i>	<i>C1</i>	<i>C5</i>	<i>C4</i>	<i>C5</i>	<i>PL1</i>	<i>PL2</i>	
Sandra Bullock	<i>EL1</i>	<i>EL2</i>	<i>EL3</i>	<i>EL4</i>	<i>C1</i>	<i>C3</i>	<i>C4</i>	<i>PL1</i>		
Sean Penn	<i>L</i>	<i>EL1</i>	<i>EL2</i>	<i>C1</i>	<i>C3</i>	<i>C4</i>	<i>C5</i>	<i>L</i>		
Kate Winslet	<i>L</i>	<i>EL1</i>	<i>EL2</i>	<i>EL3</i>	<i>C1</i>	<i>C3</i>	<i>C5</i>	<i>C4</i>	<i>C5</i>	<i>PL1</i>
Marion Cottillard	<i>EL1</i>	<i>EL2</i>	<i>C2</i>	<i>C1</i>	<i>C3</i>	<i>C4</i>	<i>C5</i>	<i>PL1</i>		

III.2. Microstructure

Microstructure in a text refers to the in-depth study of sentences and the connection between sentences and the words (Glowalla and Colonus 1982) corresponding to an analysis at morphological and syntactic levels (Casañ-Pitarch 2017). This section will cover the analysis of *Language Typology*, *Morphology*, *Morphological Formality*, *Readability*, *Lexical Density Terminology*, *Verbal analysis*, *Analysis of personal pronouns and Syntax*.

III.2.1. Quantification of forms and structures

This section focuses on the type of the text and why it is written for. In general, texts are classified according to their style and purpose. Fundamentally, there are four types of writing styles; narrative, descriptive, expository and argumentative. In addition, text types vary according to their purpose such as informative, persuasive, promotional, critical and so on. The analysis of language typology can be conducted in two ways; by using software and manually. The manual analysis yields more reliable results when compared to software analysis. A trope is a text analysis tool that can analyse the text and decide the language typology along with the setting. The analysis results of Tropes software indicate that biography texts are narrative texts. Along with the manual analysis it can be claimed that biography texts on IMDB are narrative in style and informative in purpose.

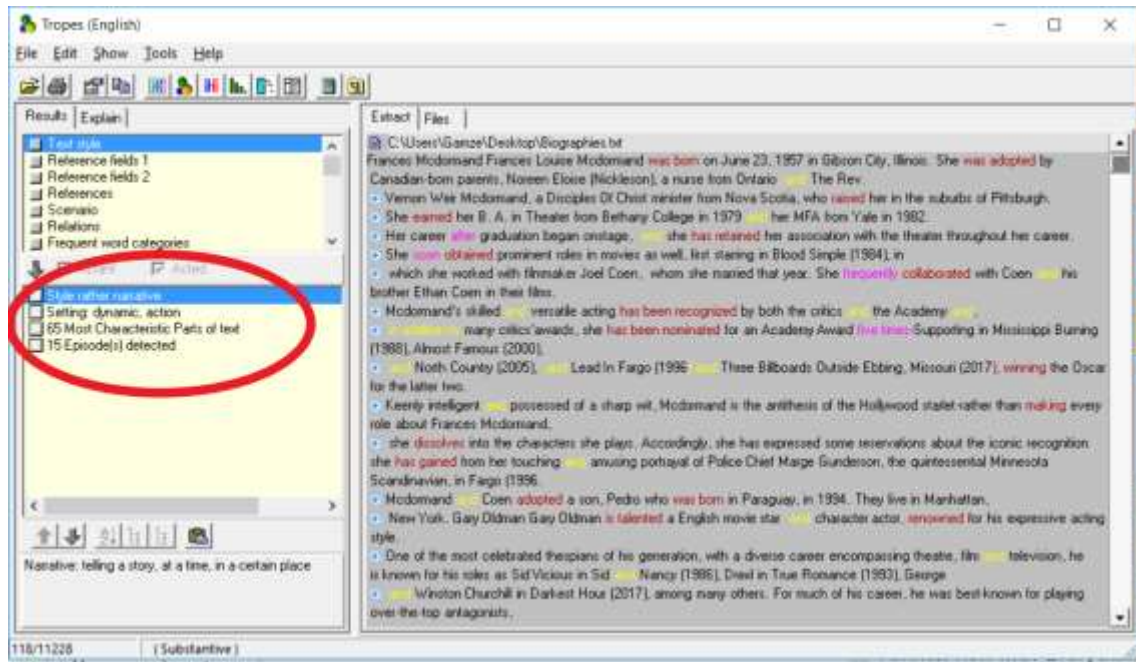


Figure 3. Language Typology Analysis Results with Tropes Software

III.2.2. Morphology

Morphological analysis refers to a statistical overview of the words in the text including nouns, verbs, adjectives, determiners, adverbs, prepositions, pronouns, conjunctions etc. Tropes software and analyzemywriting.com website were used for morphological analysis. The statistical analysis of these components is made in line with the frequency of use. Table 5 shows the morphological analysis results of the words in biography texts.

Table 5. Morphological Analysis Results of the Biography Texts

	Factive		Stative		Reflexive		Performative		
Verbs	63,6%		25,4%		11,0%		0,0%		
	(665)		(266)		(115)		(0)		
Connectors	Condition	Cause	Goal	Addition	Disjunction	Opposition	Comparison	Time	Place
	0.2%	0.7%	0.4%	64.6%	0.7%	5.4%	20.9%	7.2%	0.0%
	(1)	(4)	(2)	(361)	(4)	(30)	(117)	(40)	(0)
Modalities	Time	Place	Manner	Assertion	Doubt	Negation	Intensity		
	39.0%	13,0%	19.9%	1.1%	0.8%	3.4%	22.8%		
	(147)	(49)	(75)	(4)	(3)	(13)	(86)		
Adjectives	Objective				Subjective		Numeral		

	69,5%	21,3%	9,2%			
	(808)	(247)	(107)			
	I	You	We	They	He	She
Pronouns	2,8%	0,9%	0,6%	3,7%	86,6%	50,4%
	(10)	(3)	(2)	(13)	(304)	(177)

III.2.3. Formality, Readability and Lexical Density

Formality is related to the variation between styles or registers. Proposed by Heylighen and Dewaele (1999), the formality of language is measured by a formula which attributes an ‘F score’ to the text that determines the formality of language. Heylighen and Dewaele (1999) suggest that there are two types of formality; deep and surface formality. Deep formality refers to the components that minimize the content-dependence, fuzziness and expression to avoid ambiguity. While nouns, adjectives, prepositions and articles are more frequent in formal style, verbs, adverbs, pronouns and interjections are more frequent in the informal style. In order to determine the formality of a text, Heylighen and Dewaele (1999) propose the formula below:

$$F = (\text{noun frequency} + \text{adjective freq.} + \text{preposition freq.} + \text{article freq.} - \text{pronoun freq.} - \text{verb freq.} - \text{adverb freq.} - \text{interjection freq.} + 100)/2$$

The frequencies, here, indicate the percentages of words with respect to the total number of words. The higher the F value is, the more formal the text is. When the frequencies are put in the formula, the F value of biography texts is 76.9 which indicates that biography texts on IMDB are above-average formality level.

Readability calculation is related to how difficult a text is to read by measuring the complexity of a text with special formulas (DuBay 2007). There are several readability indexes measuring the complexity of a text from different aspects (e.g. Gunning fog, Flesch-Kincaid, SMOG, Coleman-Liau, Automated). Table 6 shows the readability scores and the corresponding level of the biography texts.

Table 6. Readability Scores and Corresponding Level of Biography Texts

Readability Index	Readability Score	Corresponding Text Level
Gunning fog	15.18	College Junior Level
Flesch-Kincaid	12.42	College Graduate Level
SMOG	13.49	Undergraduate Level
Coleman-Liau	12.61	Undergraduate Level
Automated	12.5	College Student

Table 6 shows that, based on the readability scores, the biography texts at IMDB appeal to college level students.

Didau (2013) calculates lexical density by dividing the lexical words to the total number of words in the text. The aim of a lexical density analysis is to measure how informative the text is since meaning is conveyed through lexical words. In lexical density analysis, words are divided into two categories; lexical words (nouns, verbs, adjectives and adverbs) and function words (articles, prepositions, conjunctions, to be, do, have). Lexical words directly provide information about what the text about while function words give little or no information about the text. In this case, the lexical density of biography texts is found as 57.36%. Since lexical density focuses on the amount of information of a text, this result can be interpreted that biography texts are informative texts.

III.2.4. Terminology

Terminology analysis aims to reveal the most frequent words used in the text. It is a significant stage in terms of determining the genre-specific terminology. The analysis can be conducted using a text analysis software or web tools. Among all, Tropes software yields more comprehensive results classifying the terminology in certain categories such as verbs, nouns and adjectives. Table 7 shows the most frequently used 10 words in biography texts.

Table 7. The most frequently used 10 words in biography texts

	VERBS	ADJECTIVES	NOUNS
1	Win	Best	Role

2	Play	First	Film
3	Have	Young	Actress
4	Make	Great	Performance
5	Receive	Old	Actor
6	Appear	Small	Award
7	Nominate	High	Year
8	Give	Big	Movie
9	Include	Same	Career
10	become	leading	Drama

Additionally, the figure below schematises the interrelation of the frequently used words. The analysis is made with an online analysis tool called Voyant Tools (Sinclair and Rockwell 2019).

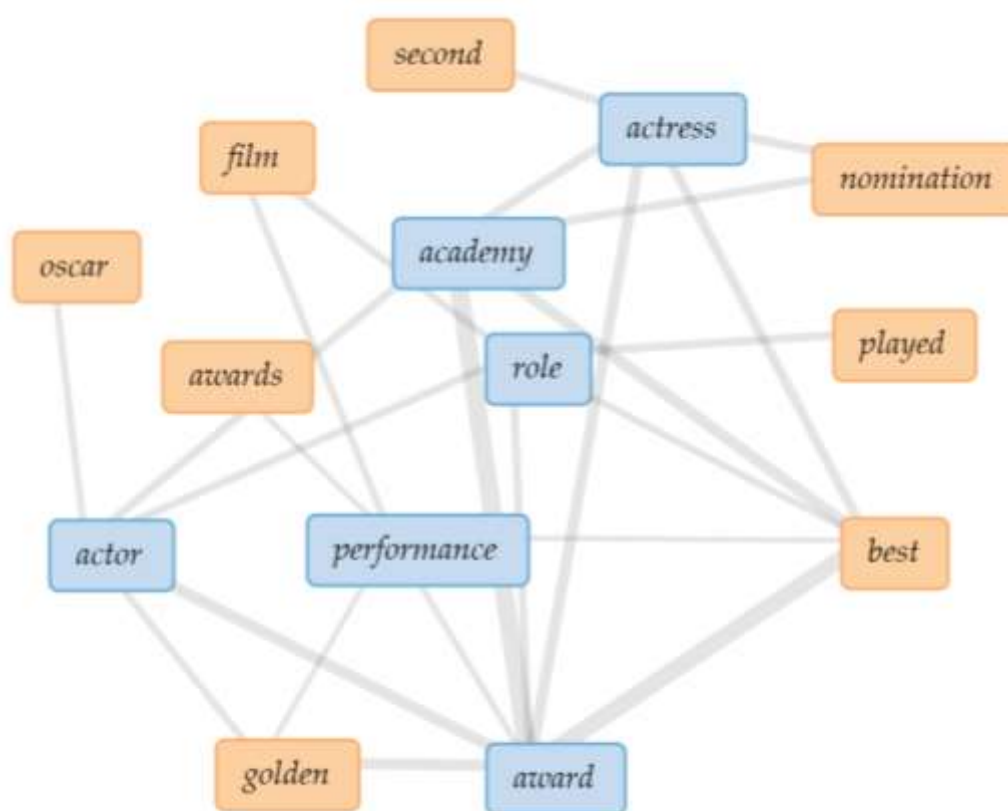


Figure 4. The Interrelation Scheme of the Frequently Used Words

III.2.5. Verbal Analysis and Syntax

The verbal analysis primarily aims to determine the frequency of grammatical structures, especially tenses, by focusing on the verbs. Analysing the grammatical structures reveals valuable insight about the structure of biography texts. Table 8 lists the most frequently used words, and with which structures they are used.

Table 8. The Most Frequently Used Words, and With Which Structures They are Used.

	VERBS	PAST	PRESENT	FUTURE	PASSIVE
1	Win	✓	✗	✗	✗
2	Play	✓	✗	✗	✗
3	Have	✓	✓	✗	✗
4	Make	✓	✓	✗	✓
5	Receive	✓	✗	✗	✗
6	Appear	✓	✗	✗	✗
7	Nominate	✓	✓	✗	✓
8	Give	✓	✗	✗	✓
9	Include	✗	✓	✗	✗
10	Become	✓	✗	✗	✗

III.2.6. Analysis of Personal Pronouns

Pronouns are indispensable agents of both oral and written communication and tell much about the type, content, context, style of the text. The results of a pronoun analysis can be a significant indicator of the style of the text. In this context, pronoun use in biography texts reveals valuable information about the formality of the texts. Table 6 lists the frequency of pronoun usage in biography texts.

Table 9. The frequency of Pronoun Usage in Biography Texts

Subject Pron.		Object Pron.		Possessive Deter.		Possessive Pron.		Reflexive Pron.	
Pron.	Freq.	Pron.	Freq.	Pron.	Freq.	Pron.	Freq.	Pron.	Freq.
I	8	Me	6	My	5	Mine	0	Myself	0
We	2	Us	0	Our	1	Ours	0	Ourselves	0
You	2	You	1	Your	1	Yours	0	Yourself	0
She	160	Her	29	Her	148	Hers	0	Herself	1
He	120	Him	24	His	138	His	0	Himself	2
It	17	It	1	Its	4	Its	0	Itself	1

IV. FINDINGS

This study aimed to analyse the biography texts on IMDB as a genre by defining communicative purpose and discourse community along with the linguistic analysis of the texts. The primary aim of biography texts is to inform the readers about the life of a person (in this case, actors and actresses). Also, biography texts meet all the standards of a discourse community, in this case contributors, as suggested by Swales (2011). Lastly, linguistic analysis of biography texts discovers all the features of the biography texts on IMDB and these features are listed below:

- Quantification analysis revealed that a standard biography text is composed of 500-600 words with seven paragraphs. The number of quotation marks used ($N = 1$) indicates that question form is generally avoided in biography texts. It can be inferred from the average word and sentence lengths that in biography texts average sentence length is preferred rather than long or short sentences which is valid for the words, too.
- With move analysis, the moves and the steps in a biography text were identified. As can be inferred from the sequence table (Table 4), a standard biography text on IMDB follows the move sequence of early life, career and personal life of the person. In addition, starting with a logline can be preferred by the biography writers.
- Typology analysis suggests that biography texts are narrative in style and informative in purpose. The informative nature of biography texts is validated with lexical density analysis.
- Morphological analysis records detailed results on the frequency of verbs, connectors, modalities, adjectives and pronouns. According to the morphological analysis results, a biography text makes use of factive verbs, addition connectors, time modals, objective adjectives and third person singular pronouns most. The results highlight the morphological components that should be addressed in biography writing.
- Heylighen and Dewaele's (1999) formality formula indicates that biography texts are formal texts and according to the readability score, biography texts on

IMDB appeal to college students. The results of this stage give some clues about the target group with which the biography texts should be studied.

- Terminology analysis focuses on the frequency of verbs, adjectives and nouns along with the links between the most used words along with the collocations. This analysis will give an inside about the words that should be primarily studied, especially the collocations from the perspective of the lexical approach.
- The verbal analysis gives clues about the grammatical structures to be studied. The results suggest that in biography texts the dominant grammatical structure is the past tenses. Present and passive is seldom used while future tenses are generally avoided.
- Pronoun analysis revealed that while subject pronouns, objects pronouns and possessive determiners are used in biography texts, possessive pronouns and reflexive pronouns are almost never used.

V. CONCLUSION

This study aimed to conduct a genre analysis on the biography texts on the IMDB website. The last 20 biographies of Oscar-Winning actors and actresses were chosen, and a corpus was compiled. First, the communicative purpose and the discourse community of biography texts on IMDB were identified and described. Then, a linguistic analysis was conducted according to Casañ-Pitarch's (2017) Analysis of Multi-Genre Structures (AMS) Model. The analysis is made in two parts: the analysis of macrostructure and the microstructure. In the macrostructure stage, a statistical analysis of the quantification of forms and structures were conducted. Additionally, the moves and the steps of the texts were determined, and the variance of move sequences was presented. In the microstructure part, language typology is identified; statistical information about morphological items was presented; formality, readability and lexical density of the texts were calculated; the most frequently used verbs, nouns and adjectives were listed; frequently used tenses and pronouns were determined.

The analysis results revealed that biography texts on IMDB can be regarded as a genre in that they meet all the characteristics of a genre proposed by Swales (1990) and Bhatia (1993). The main components of a genre were identified as the communicative purposes and a discourse community. The primary communicative purpose of the biography text on IMDB is to inform the readers about the actors or actresses in a structured way. The contributors of the IMDB comprise the discourse community of the genre. This discourse community meets all six features of Swales' definition of discourse communities. Lastly, with linguistic analysis, all the typical features of the biography texts on IMDB were identified.

Biography texts can be accepted as one of the unique literary works with their function, form and purpose. Though the studies on biography texts are relatively limited, especially in genre analysis concept, there has been a growing interest in the biography as a genre which suggests that particular concern should be devoted to the genre analysis of biography texts.

VI. IMPLICATIONS

In this study, biography texts were analysed with a multi-dimensional perspective and features of a biography texts are documented. In this sense, the communicative purposes, discourse community and structural patterns were identified. Bearing on this data, a Genre-Based Instruction for biography texts is proposed as a part of an English for General Academic Purposes course. The course is based on Firkins, Forey and Sengupta's (2007) genre-based instruction model which comprises three stages: modelling of the text, co-construction of the text and independent construction of the text.

Table 10. Suggested GBI for Biography Writing

<i>Course Title</i>	<i>Academic Writing</i>
<i>Course Domain</i>	English for General Academic Purposes
<i>Task Title</i>	Biography Writing
<i>Task Duration</i>	Optional
<i>Level</i>	Intermediate / Upper Intermediate

<p>Task Description</p> <p>Goals</p> <p>Materials</p> <p>Assessment</p>	<p>In this task, students learn how to write a biography of an actor or actress. The task includes two sections; first the analysis of sample biographies and second writing a biography from scratch.</p> <p>At the end of the task;</p> <ul style="list-style-type: none"> ▪ Students will be able to distinguish the features of a biography text as a genre. ▪ Students will be able to write a biography text that is in line with the generic organisation of the biography genre. <p>Biography corpus, text analysis tools, course portfolio</p> <p>Process-based and product based. Process-based in that students keep a portfolio, product-based in that students are expected to write an independent biography text at the end of the course.</p> <p>$100 = (\text{Portfolio Score})/2 + (\text{Final Writing Score})/2$</p>
Procedure	
<p>1st Phase: Modelling of the Text</p>	<p>In this phase, learners are expected to analyse the sample biography texts in a systematic way. Casañ-Pitarch's (2017) Analysis of Multi-Genre Structures (AMS) Model will be used for analysis. An analysis portfolio will be used to record the analysis data and create the text (<i>see the attachment for the portfolio file</i>). In the whole process, the teacher acts as a facilitator guiding the learners to analyse the texts correctly. The first, teacher asks students to analyse the quantification of the text and record the results to the relevant page of the portfolio. In this way, learners will make a soft and clear start which will help them understand the notion of text analysis before going deeper.</p> <p>Next, the teacher asks the learners to identify the moves and steps of the texts. The teacher shows some examples so that the learners can have an understanding of what moves and steps are. Then, the teacher asks them to determine the possible move sequences by scanning at least five texts and record the results to the portfolio file. After this part, learners are expected to analyse the linguistic structures deeper. The next step is devoted to the morphological analysis of the texts. By using an online text analysis tools and software, learners analyse the morphological structure of the texts regarding frequency. After each session, the teacher makes comments about how the data gathered can be interpreted. At the next section, learners calculate the formality, readability and lexical density of the texts and record the results along with the interpretations of the results. The next session aims to find out the most frequently used words in general and adjectives, nouns</p>

2nd Phase: Co-Construction of the Text

and verbs in particular.

In this phase, the teacher and the learners start to co-construct the text by following the bottom-up technique. Before starting to write, learners create a profile page of the person so that they can collect data and use in their texts. Then, learners and the teacher work together on moves one by one. Learners write a paragraph for each move, and the teacher gives feedback about the learners' writings. After feedback session, learners update their writings according to the teacher's feedback. This process continues until all the moves are checked and corrected.

3rd Phase: Independent Construction of the Text

In the last phase, learners start to write the text independently considering the teacher feedbacks and the features of the biography genre. When finished, the teacher makes a last review of the final text and makes corrections if necessary.

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Difficulties resulting from language diversity in teaching medical translation and methods to overcome them when teaching medical English to future translators

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ABSTRACT

Active cooperation and international exchange of experience in the field of medicine and health care are being employed in the contemporary world. In this regard, the application of quality translation of medical records is of great significance. This paper discusses problems related to the translation of medical terms from English into Polish, taking language diversity into account. It applies an evaluation approach to investigate and discuss the issues and complexities of translating medical terms from English into Polish. The purpose of the study is to present the various linguistic difficulties related to the translation of medical terms and the way in which students in a medical translation course deal with them. The study used qualitative and quantitative approach to evaluate the significance of the potential problem. It concentrates on various types of medical terms. The findings of the analysis of the data revealed that the translation of medical terms posed real challenges and difficulties to students who face difficulties while rendering medical terms from English into Polish that seems to be the main problem in translating medical texts.

Keywords: *Medicine, medical discourse, teaching medical translation, language diversity*

I. INTRODUCTION

Nowadays, medical translation is a highly specialized industry that plays a key role in the distribution of medical knowledge and results of medical research, in the cooperation of the international scientific community and in introducing new medical products, services and technologies to the market. For these reasons, those individuals who choose this type of activity are required to meet numerous, very diverse quality standards.

The terms “medicine” and “translation” are too broad and multi-faceted for any of their definitions to qualify for a comprehensive and consistent interpretation of each of them. Yet, “medical translation” refers to the process and outcome of the complete, detailed transmission of health information expressed in one language through equivalent text or speech in another language (Smith 2011: 135). Currently, medical translation is frequently referred to as special types of scientific, technical or technological translation

(Eck et al. 2004, Byrne 2006: 18). In this respect, it is commonly believed that a medical translator should be a medical specialist (Olle ten Cate et al. 2010: 669). At the same time, from a different point of view, the main activity of a medical translator is to translate from one language to another, and such activity requires special knowledge in the field of translation studies and linguistics as a whole (Montalt and González-Davies 2014: 20, Shyiab et al. 2010: 100).

Translation activities entail the application of knowledge and skills that are not intended to be specifically targeted in the course of study of medical specialties. Equally, the knowledge gained in translation and translation studies does not involve understanding of even the basics of medical science. Systematic development of the combination of skills involves special training so it is crucial to offer the possibility to non-medical professionals to gain that opportunity. It is important to equip future translators with those skills as they are to offer the translation services in the future to a wide audience. Moreover, literature resources have not shown any verified data on the number of philologists and doctors among those employed in the field of medical translation, but it can be assumed that, despite the relatively large number of philologists and linguists, physicians prevail among medical translators. However, when talking about medical translation as an industry, it should be kept in mind that this is mainly translation in medical discourse, i.e. the possession of specific translation skills is not only desirable, but also necessary for the qualitative performance of functional duties. Insufficient proficiency in one's native language, which is most frequently the language of translation, is often a problem (Pöchhacker and Shlesinger 2007). Surprisingly, but often seeing the way to success in foreign languages, young professionals spend a significant amount of time and effort studying the grammar and vocabulary of a foreign language (Wakabayashi 1996: 358-359), and as a result, write, for example, in English even more competently than in Polish. In the process of translation, a medical translator does not always pay adequate attention to the accuracy of translation, often hyperbolizing it as a literal translation of absolutely all terms (Newmark 1976: 12) and expressions found in the source text, which is detrimental to the natural use of the translation language and complicates the perception of the text by the customer (Kuhn et al. 2007: 820, Crezee and Ng 2016: 13). The opposite situation is also possible: due to their high professional level in the field of original text, a medical translator allows

himself to ‘creatively rethink’ some of its ‘insignificant’ moments, which can lead to distortion of the translation result (Ji et al. 2019: 103-104). The abovementioned disadvantages are deprived of linguistic specialists who studied translation studies, understood the goals and objectives, and possessed skills and knowledge of the means of translation. At the same time, they still face the problem of redundancy and synonymy of medical terminology (Cimino 1998: 42), as well as the mismatch between the medical descriptive systems adopted in the original language and culture and those employed by the target translation (Sousa and Rojjanasrirat 2011: 267). Translation of eponyms and medical abbreviations is particularly problematic (it should be noted, for the sake of fairness, that translators with basic medical education also face a comparable problem) (Sloane 1985). Linguists’ difficulties are also related to the peculiarities of the use of medical vocabulary in the occasional use of medical vocabulary, as well as to the insufficiency of their existing base of medical phraseology (Fischbach 1998: 87, Shiyab et al. 2010: 106). Of course, there are also ways to overcome this problem. For this purpose, a linguist has to master medical terminology (Dubrovskaya and Lobina 2015: 123), structure and peculiarities in the formation of medical terms, peculiarities of their pronunciation and use, to study the ‘false friends of the translator’ in the medical text (Kuzmina et al. 2015: 549), the main peculiarities of the structure and functioning of the human body, and the peculiarities of formation of the names of medicines, procedures etc. (Wright and Budin 2001: 697). In general, the acquisition of such a significant amount of information requires a considerable amount of time and effort, as well as systematic training, which is not possible to discuss due to the limited availability of specialized educational programs in this paper.

The availability of complete professional education in both medicine and in linguistics, taking into account of the aspect of high standard in this domain, at first glance appears to be an ideal combination for the formation of professional competence of a medical translator. The most effective option is to train a specialist in the field of ‘translation in the field of professional communication’ with professional orientation in the field of medical knowledge. It is crucial to identify the linguistic elements that will constitute the part of that training. The aim of this paper is to show how linguistic diversity can contribute to potential difficulties and how they can be overcome while teaching

medical English to future translators. Moreover, it is important to show which areas can pose potential problems to translators when it comes to their linguistic aspects.

II. THEORETICAL BACKGROUND

Translation is a complex and multifaceted activity that requires a great deal of human effort (González Davies 2004: 11). The main requirement for translation is accuracy (Darwish 2010: 42) and completeness (Hung 2002: 182). None of the author's ideas should be omitted or misrepresented (Castro et al. 2017: 131). The consequences of a change in the meaning of the original source may vary depending on the type of translation and may be up to the point of causing harm to a person, for example, when it comes to translation in medicine. Modern translation theory has not yet developed a single definition of translation as a language activity (Gentzler 2001: 1). One of the definitions of translation is the following: "Translation is a complete transfer by means of one language of communication, formulated in another (Millán and Bartrina 2013: 261). The aspect of "completeness" of information transmission in the process of translation also appears to be crucial from the point of view concerning rendering meaning (Gambier and van Doorslaer 2010: 97). By expert opinion, full translation of the medical text has completely different characteristics than a full translation of the journalistic text (Trosborg 1997: xii). The "fullness" is not so much a linguistic, as an extra-linguistic, pragmatic property of translation, as it is provided only when taking into account such factors as the real situation of communication, the relative socio-cultural communities of the communicating individuals (Malmkjær 2008: 51).

The global processes of the 21st century pose new challenges for medicine, which require the development of professional skills and abilities. This is impossible without close cooperation and exchange of experience at an international level. The main goals of teaching foreign language in a medical university are teaching professionally oriented reading, formation of the ability to extract necessary information from the scientific text depending on the communicative task of the specialist, and also conducting conversation on specialized topics (Strop and Carlson 2011: 87, Antic 2007: 142). Development of the ability to read and understand the original literature in the specialty is determined by the need to obtain information from foreign sources and is reflected in

foreign language programs (Antic 2007: 142-143). Knowledge of foreign languages, including medical English, helps doctors to be constantly aware of events in the field of medicine, to get acquainted with modern literature in English.

The basis of the medical language is the terminology describing the state of the organism, medicines and their impact on people, technologies used in treatment, and much more, which is found in special publications, the content of which is related to human health. Such texts, which need to be translated, can be of any level of complexity and can involve various types of texts: an abstract from a medical history, protocols of diagnostic examinations and operations performed, results of laboratory tests, information for patients and/or doctors, instructions on the use of medicines, treatment recommendations, etc. Taking these aspects into account, it is important to pay attention to translation competence. Translation competence is often perceived in translation literature as an additional skill (Pellatt et al. 2010: 177). Kielar (2007:19) states that it is “the ability to form in target linguistic texts that are equivalent to the original texts” or as Grucza (2004: 250) mentions it is “the ability to move from L1 to L2, to pass the same content in the original translation and text.” Pamela Faber (2012: 3) believes that the comprehension of the source text terminology is very crucial factor in the process of translating, the creating of the terms’ target language counterparts is of equivalent, if not, greater significance.

The main place in modern translation studies is occupied by the linguistics studies in the field of translation. As any scientific discipline, modern translation studies were developed by scientists from many countries. Much of the merit in this field is attributed to the national science in this field (Kerner and Hall 2009, Gea Valor et al. 2010).

Medical translation and the translation of pharmaceutical texts are highly specialized types of translation, which requires a translator who not only speaks the relevant foreign language, but also possesses knowledge of the special terminology of the text to be translated (Trosborg 1997: 159). Characteristic features of contemporary medicine are the increasing number of narrow specialties, the emergence of new treatment options and the development of specialized equipment and materials. Correspondingly, the requirements for the qualification of an interpreter are constantly growing (Ozolins 2010: 198). It is significant for the translator to be conscious of, and to be trained in

coping with, the technical terms that he/she encounters in translating technical texts. In this regard, García-Sánchez (2010: 186) proposes that training in technical translation is a crucial criterion to help technical translators so the aspect of training students concerning medical translation should be treated as an obvious.

Over the last several decades, the translation of medical texts in combinations of two languages in which one of the languages is English has been studied in detail. Translations highlight several major problems in translating medical texts. For example, the Quebec linguist Rouleau (203:143-152) has identified six main problems in English and French: 1) peculiarities of use, including the metonymic use of terms and the preferred use of certain parts of speech; 2) variability of terminology; 3) terminological synonyms; 4) problems of translating eponyms; 5) discrepancy of affixes in general words; 6) insufficiently high quality of specialized bilingual and multilingual dictionaries. Rask (2004: 16-17) points out the following problems on the basis of Swedish-English translations: 1) insufficient standardization of terminology, 2) the acceptability of the use of Anglicisms in the translated text, 3) difficulties in translating eponyms, and 4) differences in the organization of the health care system in different countries. Lee-Jahnke (2001: 145-153) suggests a classification of medical translation difficulties applicable to any pairs of languages: 1) terminological problems; 2) translation difficulties; 3) difficulties in translating eponyms; 4) acceptability of the use of Anglicisms; 5) peculiarities of the compatibility of language units and text structure

The classification of medical translation distinguishes between written and spoken translation, as well as any other translation (Montalt 2014: 333). Translation is provided by professional, semi-professional and native speakers of languages for which the nature of the situation, the specific education of the communication and mastery of terminology are crucial taking into account the specific education of the translator as well as the specific knowledge of the communication (Montalt 2014: 333). Professional level is characterized by the use of certain lexical units and syntactic constructions, which are also characteristic for written medical translation. This is the language of conferences, symposiums, presentations, reports, etc. At the semi-professional level (doctor-patient communication), the efficiency of communication is reduced by the fact that one of its participants is not a member of the medical profession, and, accordingly, barriers to communication are established, among which are: semantic, communicative,

psychological, cultural, stylistic. These differences may result in creating language diversity that can contribute to the development of the coherent and cohesive translation.

Taking the abovementioned issues into account, one should be aware that language diversity greatly contributes to the whole translation process. Precision in scientific and technical translations (STTs) is both essential and important, particularly in this 'technological era', but they are not easy to obtain. The transfer of information and technology from one language to another is restricted by many limitations, since each language has its own characteristics, such as grammatical and lexical properties and cultural aspects. These are barriers for translators and readers of such texts (Cronin 2003: 47). Furthermore, each language has a tendency to change over time. Changes here indicates that some words can be substituted by other similar or different words, new words are implemented to the language, and some words have established, or denote, different meanings. This kind of modification occurs because of changes in human culture and communities and it also affects the process of translation and medical discourse (Trask 1994:1). The aspect of equivalence can also result in some problems that a translator has to face. Moreover, this aspect seems to be an integral part of language diversity that can affect the final shape of the translated text. A translator's failure to accomplish a suitable equivalent translation can give rise to a mistranslation which may be misleading in most fields but which can be 'dangerous' in the field of medicine (Baker and Saldanha 2009). Problems of equivalence occur at various levels, ranging from word to the textual level. Neologisms are very common in medical terminology mainly for the names of diseases as they spread very fast throughout the world and each language needs to have counterparts for them very quickly (Montalt and Gonzalez 2007: 230), e.g. in some situations functional-descriptive terms are employed to name new diseases as it was with the term 'swine flu' that was introduced in 2009. Correspondingly, some acronyms and abbreviations can result in a problem of polysemy, as they are not exclusive and some abbreviations or acronyms can have diverse meanings. Montalt (2011) claims that abbreviations and acronyms are causes of polysemy, e.g. the medical abbreviation CF can have about 15 possible meanings.

Taking into account the concept of language diversity and the pace of changes in medical discourse, one should realize that language diversity is an integral part of teaching medical translation. Translations of scientific and technical terms ought to be updated as many terms come in languages over time and some become no longer in usage or are substituted by other terms. Language diversity includes meaning and language change which pose some of the problems to medical translators.

III. METHODOLOGY

III.1. Statement of the problem

Medical translation requires a high degree of consistency and accuracy in the transfer of the source text to the target language (TL). The translation of medical terms generally poses many challenges. While some medical terms can be translated without any difficulties, others are very difficult to translate. One of the things that can make the translation of some medical terms into English more difficult is their complex structure, e.g. hypergammaglobulinemia. Furthermore, there are medical complex terms and abbreviations (which may be vague) that make it hard for an unexperienced translator to grasp, such as the central nervous system (CNS).

It can sometimes be problematic for translators to cope with these structures in English, which can lead to incorrect translations (Montalt and González-Davies 2014: 168). Moreover, there are problems of ambiguity because many English terms are either new or so technical that inexperienced translators cannot comprehend their meaning in source language (SL) (*ibid.*).

The problems of various types of equivalence and differences in Polish medical terms for the same English medical term may appear to be unavoidable because of different factors. There are different translation phrases that operate independently, as unitary expressions in the Polish world (Baker and Saldanha 2009). The use of competing resources is regarded as one of the main causes for the multiplicity of concepts, which is mirrored by the terminological inconsistency resulting from the lack of standardization. All this highlights the significance of translator education that leads to the development of their capacity to work in the field of medicine.

To summarize, the study will demonstrate that the translation of medical terms is difficult because some medical terms have complex structures and may give rise to different semantic, lexical and grammatical interpretations that make translating very difficult. A second reason is that there is a lack of clarity or because of ambiguity which may be due to certain medical terms or expressions in SL, which in turn has a great influence on the translation process.

III.2. Aim of the study

The current paper aims to analyse a specific translation problem, i.e., medical terms. The study examines the problems that Polish students of translation majors may face while translating English medical terms into their mother tongue. The following are the research aims:

1. Rendering medical terms from English into Polish seems to be the main problem in translating medical texts.

Hervey et al. (1995: 155) mention that people have many problems with terms that are not used in ordinary language, which are, thus, unfamiliar to the translator. As a result, translators cannot guess the precise meaning of the term or make a reliable guess at its correct TL rendering and this is typical for medical terminology which often pose problems to translators who are not trained in this specific field.

2. It is essential to train future translators in the medical field before they start working in their profession.

Sofer (2011: 90) believes that all prospective translators should acquire some knowledge of the medical field in advance.

3. Since neologism, lack of equality, polysemy and terminological incoherence present significant translation problems, the aim of the study is to work out strategies to help the future translators to deal with these difficulties.

Montalt and González Davies (2007: 248) also mention that the challenges faced by medical translators can be found in the following fields, namely terminology, neologisms and polysemy.

III.3. Population and the sample of the study

The starting point for the analysis in this paper is the course entitled 'The English language in medicine', which is taught to students of English philology at the Bachelor's level. The course is not required but selective. Students decide on their own whether to participate in the course, which is partially expected to be consistent with their interests, and thus it can be assumed that students will have some kind of background in medical knowledge.

About 20% of the university students decide to enrol in this course, which consists of 15 classes (30 contact hours) per semester. Students usually do not have formal education in medicine and generally do not know much about it, although they are expected to show an interest in the subject when choosing this course.

The course is aimed primarily at students of the translation major in order to gain theoretical insights into how teaching medical translation differs from teaching foreign languages and teaching English to medical students.

The texts examined include material from students who participated in the survey from 2017 to 2019. The number of students who attended the classes in those years amounted to 61 (18 men and 43 women). The age of the course participants, who are 1st and 2nd year students of M.A. level, was between 21-25, indicating C1 level of proficiency; those students were involved in the translation major at the B.A. level

The analysis was based on the written pieces of work delivered by students, which included translating medical documents and medical texts from English into Polish as well as standard translating tasks asking students to provide the equivalent in the given language. Only translations prepared by individuals were used for the study, though sometimes students worked in teams but these team projects were not included in the analysis. Problems that appeared in translations prepared by individuals were also

repeated in translations prepared by the groups. This shows that problems arising from linguistic diversity are a challenging issue at every stage of the translation process.

Validity and reliability have been assured. All examples of medical texts were taken from officially valid and reliable sources, which were easily accessible to the researcher from websites.

III.4. Data Analysis and Discussion

The following table summarizes the findings of the student translators' responses. It indicates that 51.7% of them were acceptable translations, namely translations that were believed to be coherent and cohesive in terms of style and lexical choice made by the translators. Unacceptable translations accounted for 43.7% and 8.8% were blank, which indicates that participants did not give any response. Unacceptable translations (43.7%) reflected the difficulty experienced in this field. This result is significant as it predicts difficulties in translating into English, as well as problems in translating into Polish. The fifteen examples will be analysed in turn exemplifying the different kinds of problems linked to the translation of each of them. These examples show the general tendencies observed in rendering translation of medical terms.

Table 1. Percentage Results of the Translations of Medical Term

No.	Term	Acceptable		Unacceptable		Blank	
		Raw score	%	Raw score	%	Raw score	%
1	Outpatient appointment	42	69	9	15	10	16
2	Orthotic appointment	7	12	47	77	7	12
3	Meningococcal diseases	15	25	42	69	4	6
4	Thalassaemia	38	62	20	33	3	5
5	Aspiration	8	13	47	77	6	10
6	Demyelinating neuropathy	12	20	41	67	8	13
7	SARS	60	98	-	-	1	2
8	Paediatrician	59	96	1	2	1	2
9	Haemophilia B	53	87	5	8	3	5
10	African trypanosomiasis	12	20	44	72	5	8
11	Haemoglobinopathies	16	26	39	64	6	10

12	Ophthalmologist	38	62	13	21	10	17
13	Fundoplication	13	21	43	71	5	8
14	Immunology assessment	52	85	6	10	3	5
15	Flu jab	11	18	42	69	8	13
Total		23	776		655	132	
%		19,4	51.7		43.7	8.8	

The first term is made up of two elements, the second one is *appointment*, which is a common word and for most of the participants it was very simple to grasp the correct meaning of the term. The term *outpatient* was sometimes translated literally. The respondents recognized that an *outpatient clinic* is something located outside the hospital, but were not able to state the correct equivalent in Polish. Element no.2 (*orthotic appointment*) is similar to example no. 1 (*outpatient appointment*) as this term is a compound involving more than one element, *orthotic* and *appointment*. Most of the subjects failed to get the right meaning of the term in Polish. It seems that the first element of the *orthotic* term is responsible for the error as it was associated with the term *orthodontist* and related to teeth. As a result, it was rendered as an activity dealing in the dentistry field. The subjects failed to observe that *orthotic* is a synonym for *bone*. It indicates that students faced some difficulties deriving the meaning of the expression. On the other hand, term no.14 (*immunology assessment*) was one of the easiest elements to translate in the group, only three people offered the wrong translation. It showed that students did not have a problem deriving the meaning of the expression from the context offered.

Terms like *thalassemia*, *SARS*, *paediatrician* and *haemophilia* were rendered correctly. These terms can be translated using direct translation in Polish. Most participants decided to rely on offering the closest and safest equivalent for these terms. In the case of the abbreviation *SARS*, the transliteration of this abbreviation is commonly used in Polish. *Paediatrician* was one of the least difficult terms. It accounted for one of the highest percentages of adequate translations. Similarly, the term *haemophilia* did not pose many translation problems. More problematic was the term *thalassemia*, but most of the participants succeeded in giving acceptable translations which are often calques of the terms and are commonly used in Polish.

Meningococcal diseases appeared to be a difficult term to translate as the participants delivered unacceptable translations. *Meningococcal* is an adjective that is used to describe the diseases. Students experienced difficulties in comprehending the exact meaning of the concept. They typically offered an unacceptable translation of the term that could be back-translated as *meningitis*. Even though the participants who gave the unacceptable translations grasped the meaning of the prefix, they failed to observe the right semantic relationship linking the two elements of the term. The term *aspiration* also caused translation problems. The cause for this could be that the term can be translated into Polish using the direct translation method but the result does not reflect the medical term. Some of the translations provided were recognized as unacceptable because, from the sequence of the text, it was clear that aspiration is the concern and not the treatment. Yet while providing the equivalent in Polish, students offered translations that indicated the treatment and not the concern.

Demyelinating neuropathy is one of the conditions with a small number of accurate renderings. The explanation for this small number may be because in medical dictionaries the compound could not be found. Most of the students offered a back-translation of the term *neuropathy*. This could have been due to their failure to find a Polish counterpart for the first element, *demyelinating*, so they tried to resolve the problem using the omission strategy. This led to a loss of meaning of the one part of the concept. Term no. 10 (*African trypanosomiasis*) also caused some problems for the future translators. The students had difficulties with the second part of the concept as it is related to the Latin word denoting *sleeping sickness*. Lack of knowledge concerning the Latin stock of vocabulary in medical translation can result in more problems like this. Term no.11 (*haemoglobinopathies*) appeared to be too complex to students to grasp the meaning of the term. Students probably had problems with identifying the semantic components that were embedded in the term. This could be ascribed to the fact that the participants did not know the meaning of the condition in English and had problems with understanding what the components meant in English. ‘Fundoplication’ has shown a low rate of appropriate translation. The answers offered by the participants indicated that the respondents were unable to comprehend the meaning of the word in English (SL) and were not able to find any easily available counterpart in their mother tongue that resulted in offering a direct calque into Polish. The term *flu jab* was not easy

to translate. Moreover, this is an example of medical jargon. There may be many variants (e.g. injection, shot) of each word that can also cause some difficulties. The group of students had some difficulties in comprehending the accurate meaning of this concept. It appeared that the polysemous element *jab* was the problematic part of the compound. This caused the participants confused as to what to select as the suitable equivalent for *jab*, which goes with the element flu. Besides this was a problematic word, the compound itself is not present in medical dictionaries, so the participants may resort to employing literal translation.

One can notice that some technical terms pose a lot of problems for the participants. Moreover, some of the participants find it more difficult to render the proper meaning while some of these terms are embedded in the context, as the context frequently creates another challenge. Therefore, So, it is vital to examine how the same subjects decode the meaning of some technical terms. In my opinion, it is not possible to measure how many ideas and how much information a medical translator must try to understand in practice in order to translate efficiently. Alternatively, I will offer some qualitative recommendations based on the medical translation course I had a chance to create.

I consider that students who are involved in translating must be exposed, either by taking part in a special courses or self-paced learning, to the entire subsystem of medical concepts. This will allow them to have a holistic view of the area of concepts. In clinical medicine, the conceptual fields are clearly represented by organ systems. A systematic presentation of the basis of medical knowledge about a particular organ system may encompass the following aspects: anatomy and physiology, disease symptoms, diagnostic work, and treatment. The medical translation course therefore should comprise quite extensive English texts on various organ systems. Some terms should be emphasized during class discussion, e.g. due to the specific nature of their Polish equivalents or in order to establish a link between the concept and other concepts from the text. There is sometimes additional terminology presented which is not linked to a specific organ system. For example, the difference between *hypertrophy* and *hyperplasia* in the context of *mild prostate hypertrophy* / *prostate hyperplasia* in the presentation of the urinary system has been a point of reference for the implementation of related terms such as dysplasia, cancer or anaplasia and proliferation.

The translation course would therefore have to contain solutions to enhance the maintenance of thematic knowledge. This is best achieved, in my opinion, by enabling students to understand the links between concepts. Learning associative relations is quite obviously the simplest way to gain a broader comprehension of the conceptual system of a field.

Moreover, a course in terminology and phraseology must apply to both English and the students' own mother tongue. Since medicine is a domain of life to which virtually all of us have been exposed and medical issues are passed on in everyday situations by means of words, which may vary from official terminology, it is vital that students should study those texts for patients that may not include adequate terminology in Polish. This concerns mainly - and paradoxically - words of Latin and Greek origin, which seem very medical, but in reality are not used by physicians e.g. *chronic* or *epilepsy*.

Cases of terminological distortions can also create some problems in translation from a foreign language to one's mother tongue. For example, the *gallbladder* (Polish literal translation 'gall sac'), may have its unprofessional sound of gallbladder when the translator decides to use the common term instead of sticking to the literal translation (*gall sac*), resulting in an error.

The terminology should also be taught with an example-based linguistic approach and not with the purpose of giving students the knowledge that is specific to a particular concept. Students may be concerned with understanding the causes of *hypocalcemia*, but their translation skills will be better understood if they know that the name of such laboratory abnormalities is developed in accordance with the pattern *hypo/hyper + name of substance*, as it will allow them to use similar patterns to understand more terms that cause potential translation challenges.

Obviously not all information concerning medical terminology can be modelled, particularly since the terminology is to be provided in two languages. As mentioned earlier, English Latinate terms have Polish equivalents that represent native Slavic words. Some of them are structurally identical to the English terms while some are not. Multi-word terms may likewise be classified in one of three categories: similar in form (e.g. *invasive cardiology*), similar in structure (e.g. *malignant anaemia*) or differently structured (e.g. *cerebral hematoma*).

Self-study skills should not be overlooked because most translation assignments require students to understand unfamiliar concepts, but this is no different from what can happen with other translation courses with specific orientation. Students should also receive a list of general medical reference works and should be encouraged to read professional medical texts regularly.

IV. IMPLICATIONS AND RECOMMENDATIONS

Medical translators should have a good knowledge of both SL and TL, a good knowledge of the subject, an up-to-date knowledge of their field of specialization and a broad comprehension of medical terms and abbreviations.

After the analysis of the errors, it can be stated that the students do not have adequate knowledge of medicine, which results in incorrect translations. It is evident that there is a problem regarding imbalances, relationships, abbreviations and new terms, as translators appear to be trying to find them in English-Polish medical dictionaries that they believed to be the only source of information that could be seen as a reliable source of information. At the same time, they disregarded various databases, multilingual corpora and other resources that could offer them more reliable information. This would indicate that regularly updated English-Polish medical dictionaries would be very useful and the quality of translation would be much better. It would be advisable to suggest that the Polish academics should undertake some efforts to create a dictionary that would be very helpful and of better quality for translation. It is important to point out that specialized medical dictionaries on the Polish market are becoming more and more popular, but there are still only a few of them, which does not provide full access to medical knowledge.

Furthermore, teaching medical translation with respect to linguistic diversity should be compulsory for translation majors as students do not always are aware that linguistic diversity is a key element. It would be worth engaging translators who are interested in working in the field of medicine, in order to be able to participate in the training of students to work in the field of medical translation. It is also advisable to involve medical students in the translation process in order to show students that the aspect of collaboration with a professional is essential at a certain stage. This training would

enable students to become well acquainted with medical terminology and the manner in which they work. From an academic point of view, deeper research on terminological inconsistency and standardization would be useful.

This study was only aimed at addressing the problems that students and subsequently future translators may encounter, it should be noticed that the greatest problem arose in the use of medical terms in English and Polish. In general, further in-depth research is required to address the problem of medical translation, and in particular the problems of semantic and associative relationships and abbreviations.

V. CONCLUSIONS

The results of this research reveal that the translation of medical terms is a matter of concern for unprofessional translators and university students. Moreover, the research results reveal that inexperienced students have a clear weakness in identifying precise translations and appropriate explanations of terms which are not found in English-Polish medical dictionaries and CAT tools or have no counterparts in Polish. The study also found that most of the unacceptable translations come from students who have less than five years of medical experience. This could be negatively reflected in their work as translators in a field such as medicine. Furthermore, the results of the study highlight the fact that hiring inexperienced translators and interpreters in bilingual settings (English and other languages) without offering them training may create risks for communication between patients and healthcare professionals. That is, interpreters interested in working in the medical field must be better trained before they start their careers.

The findings of this research confirm previous hypotheses that translators would encounter some obstacles in translating some medical terms. As mentioned above, the findings demonstrate that certain difficulties were triggered by certain medical terms, that usually that terms which were represented by compounds, collocations and abbreviations, which cannot be found either in English-Polish dictionaries or in monolingual dictionaries. They also indicate that the students use different approaches to translating medical terms with varying degrees of success.

For this reason, hopefully the results of this study will be considered as a way of enhancing the level and competence of translators by offering them special training in medical translation and expanding the translation programme for translators in Poland to include some medical translation courses.

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Communicative competences in non-linguistic university degrees

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ABSTRACT

As labour markets continue to change rapidly, the learning environments continue to be unchallenged in the provision of new professionals across the world. This change has compelled the need for students to attain communicative competences in non-linguistic institutions of higher education. In order to address this issue, we propose a novel approach to communicative competences integration into the curriculum development of a specialised foreign language course. For this purpose, we combine students' needs analysis with a personalised English for specific purposes (ESP) course design that motivates them to learn more about technical and professional environments through a skill-based routing. Additionally, we provide a scale for measuring training outcomes as well as suggest first results from the piloting phase of the teaching experience. The findings of the study highlight usefulness of the customised competence training experience.

Keywords: *higher education, communicative competences, second language acquisition, foreign language teaching*

I. INTRODUCTION

Working environment in the 21st century is changing fast. As a result, higher education institutions include communicative competences in non-linguistic degrees to ensure their students come out as well-prepared individuals. The competence training offers graduates the ability to develop their goals and acquire an understanding of a variety of specific skills required to succeed in the labour market. Fundamentally, competence means achieving something successfully and efficiently (Feldhaus et al. 2006), it becomes a positive quality that all professionals want, regardless of the field of expertise. Several studies were conducted in different countries, so it is essential to point out some of the most relevant approaches and results.

According to a research carried out in the USA by Feldhaus et al. (2006), students of university degrees need specific training that guarantees the acquisition of ethical, social and professional responsibility competences. In addition, the authors of the teaching

project designed a qualification based on the essential competences for professional leadership in organisations. However, we have noticed that the focus on the leadership competence, provided by Feldhaus as the main course of orientation, contains no broader competence vision and does not combine it with second language (L2) skills.

The work of Walther et al. (2011), also based on the US experience, argues that competence-based training of engineering students is determined by a series of factors of the education system. Unlike the previous study, the authors propose the use of a framework based on seven blocks of professional skills linked to the technical training model. Due to the linguistic profile of students –future American engineers whose mother tongue is English–, the communicative competence in L2 has not been considered.

The research of Argüelles Álvarez (2013) conducted in Spain reveals ground-breaking achievements in teaching specialised English and content course. The combination of Content and Language Integrated Learning (CLIL) methods as well as a set of generic competences were taught within Moodle environment and on-campus. The assessment scale viewed holistically could gain precision and relevance in connection to competences achievement. In general, course activities planned alongside with project work designed specifically for the course were insightful for our L2 curriculum design.

Another investigation, undertaken by Kongsom (2016) in Thailand, improves the use of communicative strategies in engineering degrees. Foreign language students often face difficulties in learning English, specifically oral expression. The communicative strategy is closely linked to communicative competences. As determined by the study results, a course of ten communicative strategies managed to improve communicative and strategic competences of university students.

The main objective of our study is to investigate the combined methods and procedures related to the L2 communicative competence development. Additionally, the research included mediation as a new key aspect for teaching and learning foreign languages according to the CEFR. The study`s research questions to explore will include:

- (i) What type of methodology and procedures could address the implementation of linguistic competences in L2 training at university level?

- (ii) Is it possible to personalise and bear in mind students' interests while designing a training course?
- (iii) Can we assess training results?
- (iv) Does the use and piloting of a proposed course model correlate with expected learning outcomes in terms of competences acquired?

Thus, thorough research on literature addressing communicative competence training will be carried out. Scholarly articles will be used, and a qualitative review and analysis will be carried out to justify our stance on the importance of communicative competences in higher education across the world. In our study, the concept of non-linguistic university degree allows variation from technical to financial areas to extrapolate research results. The different political and geographical situations including various activities and social context around the world affect the issue.

Additionally, the attitude and the students' expectations are critical factors in the attainment of competences among students. Many students may view the competences as a waste of time and irrelevant in their field and our task is to change this point of view through the present research.

The need to train students to communicate effectively enough for the modern-day workplaces is the main reason for this article as it discusses the importance of communicative competency in non-language degrees across the world. The study is critical in determining the attention that higher education is giving to communicative competence. The research will also be vital in determining how the institutions are adjusting towards providing students with the competence both in language and non-language degrees.

II. THEORETICAL BACKGROUND

II.1. Concept of communicative competence and its development

The concept of communicative competence was introduced by Hymes (1972). The term was coined by Hymes while reacting against the perceived inadequacy of Noam

Chomsky's (1965) difference between the performance and linguistic competence. In order to address Chomsky's abstract idea of competence, Hymes conducted an ethnographic assessment of communicative competence that integrated communicative form and functions as they relate to one another. Hymes' approach towards improving the understanding of communicative competence is described as the ethnography of communication. Hymes believed in the ability to communicate properly needs to be developed in language teaching. It implies that students must be taught about various ways of learning a language in their daily communication to enable them to demonstrate their language mastery. The aim of Communicative Language Teaching is to infuse into individuals the ability to create and to construct utterances (spoken and written), which have the desired social value or purpose (Kramsch 2006).

Fundamentally, communicative competence concept has been widely recognised in the teaching of English language, as well as other fields such as sociolinguistic, discourse, strategic and pragmatic competences. According to Kramsch (2006), language communicative competence is the expression, interpretation and negotiation of meaning between interlocutors. The development of communicative competence among the students has contributed to a huge recognition of English as a fundamental communicating tool after graduation in many parts of Europe where the language is treated as a foreign language. The use of the English language, for example, skills and cultural aspects have permitted them to learn about ways of communicating with people of different cultural backgrounds in real language contexts (Pepper 2011).

At the pedagogic level, the approach through which the competences highlight the practical side of learning, the use of the learning effects for the individuals as well as the society. In this regard, studies have shown that the use of competences in defining the objective is crucial as it allows the education to provide a considerably more direct answer to the concrete needs of the learning community. Voiculescu (2013) reported that the integrator model of skills enhanced a proper interpretation of the concept, thereby preserving the elements identified. According to the authors, the communicative competences have the ability to address the knowledge and abilities that integrate the values, attitudes and the necessity for problem-solving.

The communicative competence provides knowledge that ensures the theoretical basis of the competence, the ability to represent the executory, acting side of the competence and the personality characteristics that direct the competence from the value point of view (Kramsch 2006). Within the university environment, the communicative competence is defined in reference to given disciplinary competences. Notably, they are competences that transcend the education discipline. Theoretically, some skills are learnt with the disciplinary ones. They might be included explicitly and implicitly.

The establishment of the Common European Framework of Reference (CEFR) has further enhanced the development and use of the communicative competence in the teaching of the University students across European nations (Council of Europe 2018). Primarily, the framework was developed as a continuation of the Council of Europe's work in language education during the 1970s and 1980s. Notably, the action-oriented approach of the framework builds on and proceeds beyond a communicative approach in the teaching of the foreign languages amongst the university students. Thus, they are led to a better perception of what is general and what is specific concerning the linguistic organisation of different languages.

There are several theories that support the communicative language teaching. One of these theories is Hymes' theory (1972) of communicative learning. In this theory, Hymes (1972) proposed a theory of language performance or use. This theory bases its core arguments on the acceptability and therefore pursues the models and rules that underlie within people's performance. Hymes' framework (1972) goes beyond the difference between the competence and performance, based on the fact that both can be important. This has led to the development and understanding of the communicative competence teaching, which emphasizes all the four skills, namely listening, speaking, reading and writing. However, listening and speaking have a special place in Communicative Language Teaching.

II.2. Necessity and feasibility of developing communicative competence

Teaching communicative competence provides the students with an opportunity to speak and share their ideas in a relatively relaxed manner. Ideally, the students are subject to being the major players or protagonists within the classroom settings as part

of foreign language learning (Valdman 1992). As such, their initiative and motivation are both enhanced. Studies have shown that the problems that can be brought by the lack of competence in a foreign language can be solved through the implementation of communicative competence as a teaching strategy (Pepper 2011). Communicative competence does not only focus on the development of the students' listening and speaking abilities but also their writing skills.

Many national governments have tried to adapt the curricula of their programmes to the needs of the labour market, and equipping their students with the transferable competences that will enable them to apply their knowledge in various professional areas. The future employer requires these skills. Teaching the communicative competence in non-linguistic universities, therefore, facilitates the introduction of the new teaching methods, which creates a diversified teaching process. Under these circumstances, teachers can utilize the various resources to assist the students in developing their communicative skills, which is one way through which diversity is manifested.

For instance, English teachers might use pictures to foster group discussions, thereby assisting students in developing improved informational understanding and the cultural backgrounds on various topics. Games also constitute one mechanism that promotes communicative competence (Halász and Michel 2011). Ideally, games can be used to help students learn about the foreign vocabulary and practice their writing skills. More specifically, teachers can assist the student in learning about the vocabulary and consequently practising their writing skills. In some areas, teachers can help students in developing contexts in a foreign language when teaching them grammar and the culture of that particular foreign language. Students can be asked various integrative questions to enable them to practice not only their spoken foreign language but also learn about the different cultures (Valdman 1992). Undeniably, this can be an excellent platform for students to learn and deeply study a foreign language.

II.3. Challenges of developing student's communicative competences

Studies have reported that inadequate interaction between teachers and students contribute to one of the significant traditional limitations to the learning of foreign

language. Traditional learning encompasses a simple interaction mechanism where teachers are involved in lecturing while students take notes and rarely participate in class. Further, test-based teaching methods make learners develop a certain degree of reluctance and therefore become unable to participate in various classroom activities. In this sense, communicative teaching approach is still a journey from the theory to practice within the non-linguistic universities (Halász and Michel 2011).

Lack of individual initiative towards learning the foreign language also influences the effectiveness of teaching. Learning a foreign language calls for an own effort, although a joint initiative by both the teacher and students is essential. While it is evident that most universities pay more attention to the development of the students' communicative competence, the traditional systems of assessment do not take into account whether or not the students have genuinely developed such competences (Kramsch 2006). In most cases, such methods are still ingrained, even though the dichotomy between fluency and accuracy is always worth to be considered. Related to this is the fact that students may not be willing to learn by themselves. Studies have found that students who do not speak the foreign language as their major may demonstrate a varied opinion about that particular language (Halász and Michel 2011). As such, the absence of both the input and output reduces the students' interest and skills in reading the vocabularies. This kind of attitude towards learning a foreign language may severely impede students' learning. In essence, the teachers and students need to establish a steady relationship between foreign language teaching and learning.

III. METHODS AND PROCEDURES

The communicative competence deals with the ability for a student to communicate, manage, relate, create and recognise. In order to tackle the issue of personalised implementation in non-linguistic degree second language (L2) learning and curriculum design, the following methods and procedures will be used in this study. Initially, we will perform students' needs analysis and then, in line with its results, we will design a combined training process based on communicative competences progress. Finally, an assessment scale and a self-assessment table will be proposed to measure competence achievement.

III.1. Student needs survey design

As demonstrated by the soft competences required in the university and work context, it is necessary to be a qualified specialist and to have a correct command of professional expertise related to the ability to communicate effectively. In addition to this challenge, university students have to acquire L2 (English language) skills. Thus, non-linguistic education requires a strong focus on communicative competences embedded in curricular programming and teaching materials of specialised language subjects. A method selected for detecting students' points of view and motivation is a needs analysis that is going to collect learners' background information on English training and special vocabulary preferences. 76 engineering students of the *Universitat Politècnica de València* took part in our survey and provided us with their opinions and suggestions that will be described later in the Results section.

III.2. Communicative competences learning process

It should be noted that a student survey is an essential starting point in the research process. Due to its personalised approach, we can design a didactic planning aimed at achieving curricular objectives. Specifically, the linguistic objective focuses on level B2 (Council of Europe 2018, 2001) and entails a correct mastery of the four skills (oral and written expression, reading and listening comprehension). Moreover, a number of additional 21st century competences should be included in the learning process: mediation and online training competences, as well as pluricultural and plurilingual competences.

However, at the lexical level, needs analysis outcomes will provide us with solid data on thematic choice for the course dossier. The study looks at ways student motivation regarding themes is used to reinforce language competence training. A course dossier contents will be compiled from ten units based on vocabulary section approved by students, a wide range of activities also combines speaking, grammar, reading, paraphrasing and translation tasks. Each unit will promote the use and development of competences through a dynamic L2 environment as well as encourage reflection point on the knowledge and skills acquired or in progress.

This didactic strategy is proposed in line with the learning process based on tasks and projects and follows the curricular design guidelines set by Nation and Macalister (2010), Nunan (2013, 2004) and Ur (2012). These guidelines will allow certain linguistic concepts to be worked on with a greater degree of adaptation to the learning objectives and transversal competences.

III.3. Measuring language competences

As mentioned before, a number of higher education institutions have introduced key competence measurement, including communication in foreign language as one of them (e.g. Università Di Bologna, Coventry University, University of Cordoba, Alexandru Ioan Cuza University, among others). However, we cannot use them to tackle specific language competences while teaching foreign languages in non-linguistic degrees because of the missing linguistic components. For the current study, the researchers had to design a specific scale for measuring communicative competences' achievement within a specialised training context.

Language factors promoted by the updated Common European Framework of Reference for Language (Council of Europe 2018) will play an active role in emphasising the B2 level of English through seven language competences (LC): LC-01 Listening, LC-02 Speaking, LC-03 Reading, LC-04 Writing, LC-05 Mediation, LC-06 Pluricultural and plurilingual competence, LC-07 Online training competence.

IV. RESULTS AND DISCUSSION

IV.1. Needs survey analysis

In line with the Bologna process priorities, our research places students at the centre of the learning process and we will study both their linguistic background and technical thematic preferences. 76 engineering degree students of the *Universitat Politècnica de València*, Spain (academic year 2017-2018) took part in a needs survey aimed at providing specific information through the Google format survey. The purpose of the survey was to get a better understanding of our future students' language background, future linguistic needs together with motivation towards a number of specific topics.

The latter has become significantly relevant for the students' involvement in their own communicative competence advance. In this respect, it is worth mentioning that the training designed aims a diverse group of future engineering staff specialised in industrial technologies, chemistry, biomedicine, energy among other. So, a closer connection between the learning process planned and the way we personalise it, can keep the course aligned with a meaningful competences training.

Here below are displayed the results of our survey (See Figures 1, 2 and 3):

a) Language learning

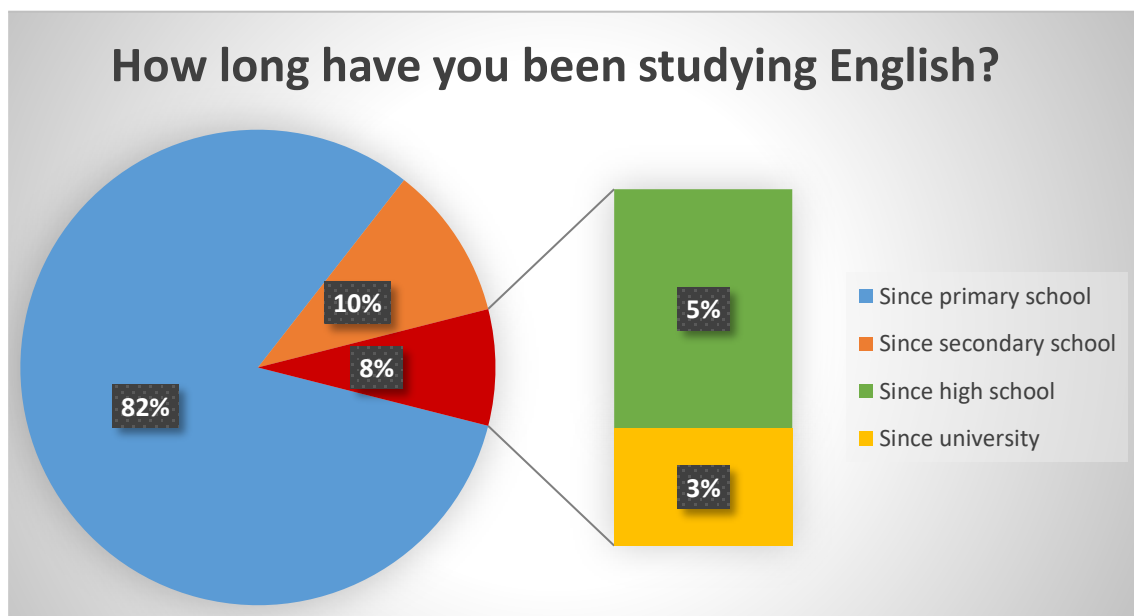


Figure 1. Language learning background.

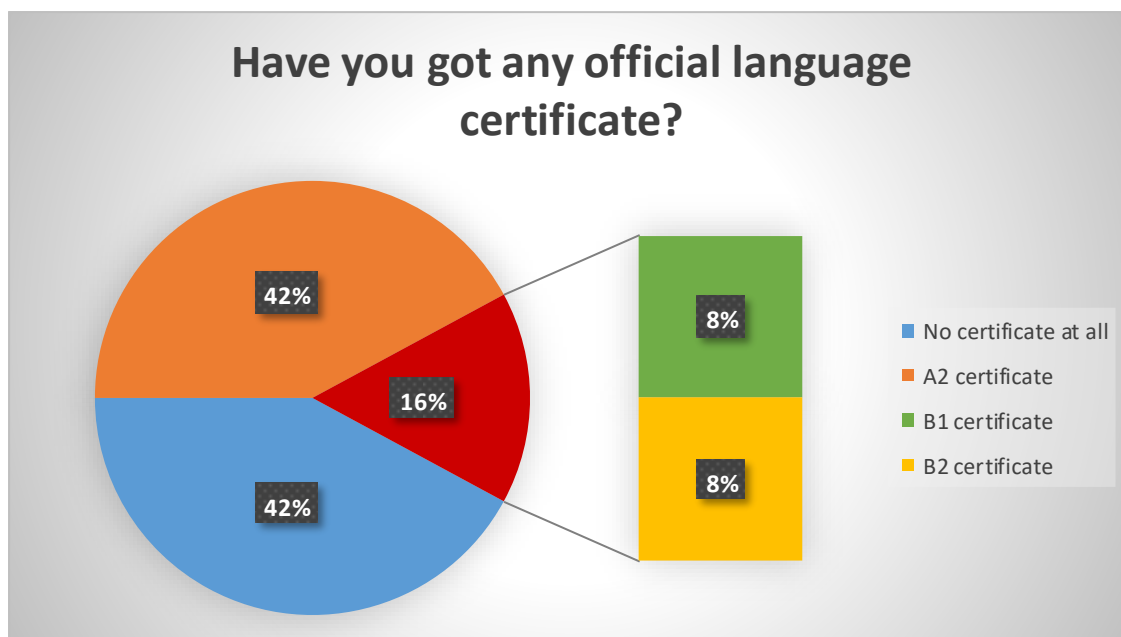


Figure 2. Official certificates obtained by engineering students.

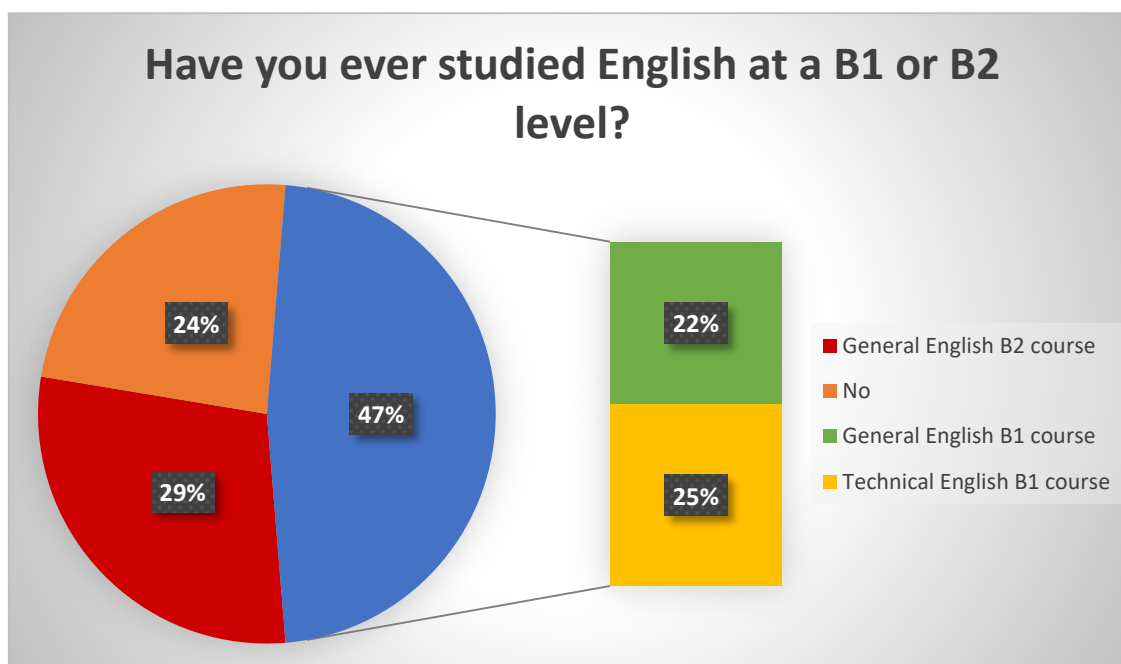


Figure 3. Previous general or technical language learning background.

According to the answers received, the majority of university students (82%) started learning English in elementary school. 42% of the respondents admit having the official

A2 certificate in English, 8% have an official B1 level and 8% a B2, while 42% lack any type of official certification. Regarding the previous experience of learning English, the proportion obtained corresponds to the almost equal distribution of courses of general English B1 (22%), technical English B1 (25%), general English B2 (29%) or absence of previous experience (24%).

b) Future L2 use and vocabulary preferences

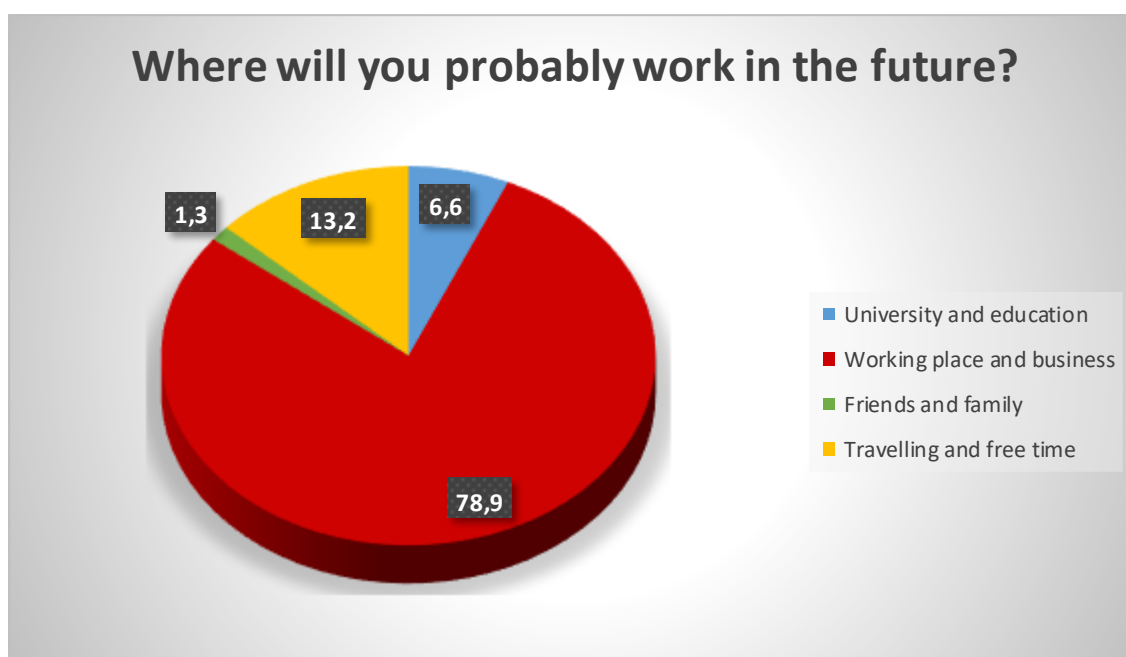


Figure 4. Future working place.

The use of English in the future leaves us with clear evidence of the respondents recognising the importance of L2 to achieve professional goals. The majority (78.9%) have indicated the use of English in their future jobs as the most likely scenario, the second most voted option (13.2%) is travel and free time. The third choice (6.6%) is the university and educational environment, and friends and family (1.3%) rank in the last place.

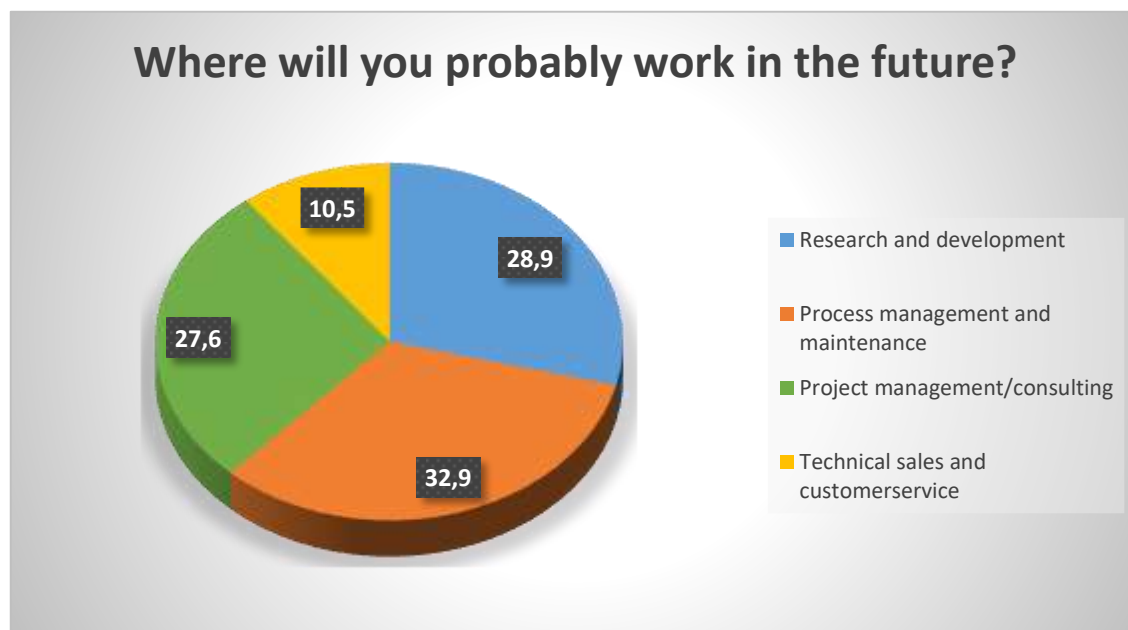


Figure 5. Future work options.

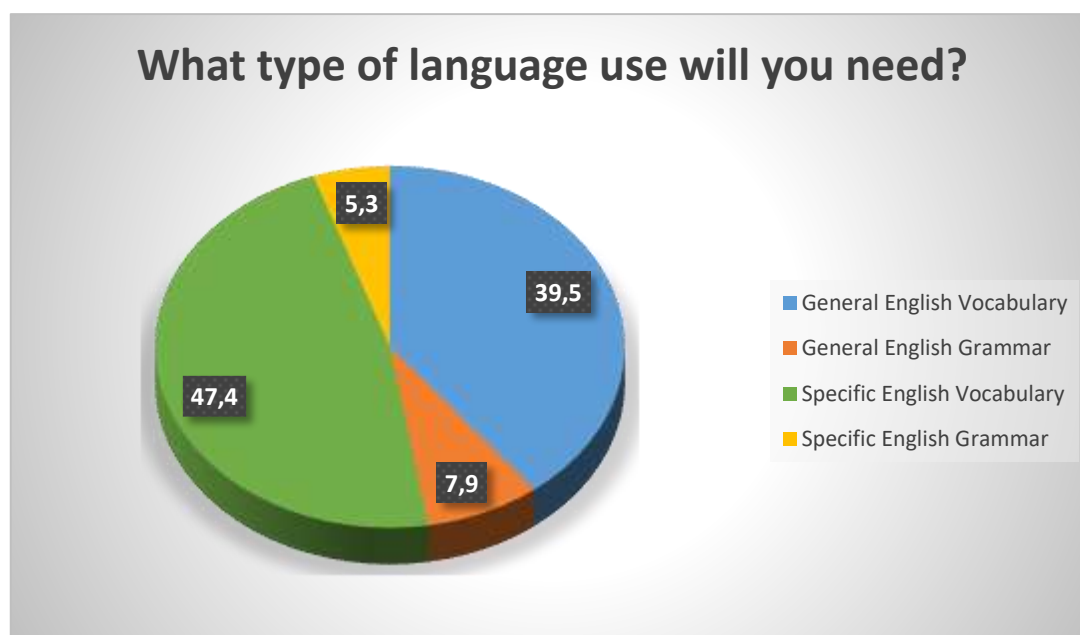


Figure 6. Types of future language use.



Figure 7. Types of future language skills needs.

In the survey, students choose to work in the future in the areas of process management and maintenance (32.9%), research and development (28.9%), project management and consulting (27.8%), technical sales assistance and customer service (10.5%). In line with job expectations, students of university degrees indicate future needs of specific English vocabulary (47.4%), general English vocabulary (39.5%), and, to a lesser extent, general English grammar (7.9%) or specific grammar (5.3%). The linguistic skill most in demand for their professional future is oral expression in L2 (81.6%), followed by oral comprehension (9.2%), written expression (5.3%) and reading comprehension (3.9%).

The data from the topic preference survey gave promising results. Most of the participants agreed with the topics and the precise values for each one of the topics are listed in the figure below:

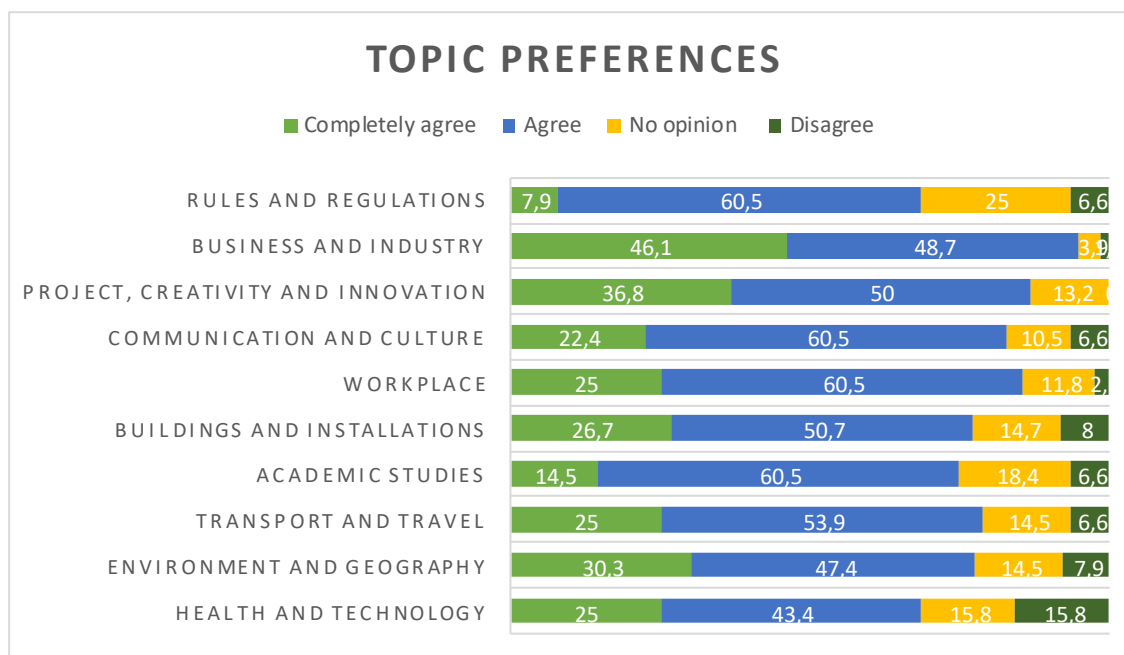


Figure 8. Topic preferences.

c) Proposals and suggestions

The needs analysis survey includes the following set of open-ended questions:

- What other subject could we include in the design of the course? Several respondents pointed out the need to incorporate: New technologies, Art, Cinema and history, Science, Teamwork, Job application, Marketing strategies, How to communicate well, Business and negotiation, among others.
- What would be the best English textbook for each respondent? Among the answers obtained are, for example, *English grammar in use*, *Gold First*, *Objective First*, *Communicating across cultures*, *Cambridge English B2 level*, *Face-to-face*, *My grammar lab* or speaking skills books.

The results displayed help obtain characteristics of previous L2 knowledge of our students, validate possible didactic topics and suggestions regarding our students' L2 training experience. Just as respondents suggested, we enriched our course content with

multicultural job and academic oriented activities as well as strengthened grammar preparation to interconnect it with specific vocabulary.

IV.2. A course dossier for teaching competences

In line with the Bologna process priorities, our research places students at the centre of the learning process and we will study both their linguistic background and technical thematic preferences.

The course dossier covers the main areas of English grammar and concentrates on aspects that learners need to advance in listening, reading, speaking and writing skills to be able to communicate confidently. It consists of ten units which are based on the most up-to-date topics to engage learners to study the language according to the B2 level requirements (see Table 1). A wide range of activities has been designed to engage learners and the language to the real-world demands and to group the units into the following type of activities:

- Warm-up activities to introduce the topic and give the students a chance to work in groups to share knowledge on the topic;
- Vocabulary activities allow students to reinforce the newly acquired words in a context;
- Grammar activities to build knowledge on different grammar aspects through fill-in gaps, writing or group activities;
- Reading activities to practice the reading skill through interactive exercises;
- Paraphrasing, translating activities to connect L2 structures and mother tongue of our students;
- Discussions, information analysis activities to encourage application and improvement of transversal competences;
- Summary, reflection and self-assessment activities to identify and measure competences acquired in a particular unit.

Table 1. Dossier contents (Polyakova and Stepins 2019). Source: authors.

Dossier	Unit contents
Unit 1. The world around us	Vocabulary: Geography and environment. Grammar: Quantifiers, articles, uncountable and plural nouns.
Unit 2. Health technology	Vocabulary: present and past of health technology. Grammar: comparison and order of adjectives, prepositions at, on, in. Speaking topic: sport.
Unit 3. On a business trip	Vocabulary: transport and travel. Grammar: infinitive and -ing, irregular verbs.
Unit 4. Academic issues	Vocabulary: academic CV, writing clearly. Grammar: connectors, prepositions and expressions. Speaking topic: Erasmus interview.
Unit 5. Buildings and facilities	Vocabulary: buildings, industrial facilities, problems with installations. Grammar: present tense, past tense, present perfect.
Unit 6. Workplace	Vocabulary: workplace. Grammar: modal verbs. Speaking topic: SWOT analysis.
Unit 7. Communication	Vocabulary: communication and media. Grammar: future tenses, conditionals, temporal clauses.
Unit 8. Projects, creativity and innovations	Vocabulary: projects, creativity and innovations. Grammar: active and passive voice.
Unit 9. Business and industry	Vocabulary: Business and Industry. Grammar: Reported Speech, Reporting Verbs and Their Patterns
Unit 10. Rules and regulations	Vocabulary: Rules and regulations. Grammar: future tenses

When linking the teaching of communicative competences in L2 with professional needs, the starting point is to customise ten didactic units according to the needs of future specialists. Likewise, each unit proposes a clear communicative-linguistic approach of B2 level and connects unit contents to the list of transversal competences chosen for the current project. In order to illustrate the various types activities designed for the first unit, we have selected the following combination of competences and tasks:

Unit 1. The world around us (unit name chosen for the topic Environment and geography).

Language competences, B2 level of English:

- Speaking, listening, reading, writing;

- Vocabulary (geography and environment);
- Grammar (quantifiers, articles, uncountable and plural nouns);
- Mediation (groupwork and presentation of different types of energy).

Activities:

- Discuss different types of energy in your country (page 10, activity F);
- Classify energy types, indicate advantages / disadvantages in a table (page 11, activity G); write a short text giving the opinion on the classification (page 11, activity H);
- Work in groups and present different types of energy to convince others to use this type of energy (page 11, activity I).

In this manner, we account for a course dossier prepared so that any L2 English professor can have several pre-designed thematic activities closely related to competence development. Similarly, the dossier format will allow the incorporation of learning tasks based on cross-curricular projects and explore new paths of collaboration with teachers-experts in specialised subjects.

IV.3. Assessing communicative competence development

As mentioned before, the research also includes an adapted assessment scale that will strengthen knowledge acquisition process and ensure effective competence achievement. Besides that, a rubric presented (see Appendix I) suggests a user-friendly format based on competence names, descriptors and Likert scale marking that can be used for teacher, peer and self-assessment.

Class:		Date:	
Cues		Notes	
Summary/ reflection			
Self-assessment			
Language skills acquired			
Professional competences acquired			

Figure 9. Self-assessment part at the end of each unit.

Another compelling challenge in the area of assessment is the development of self-assessment skills of our learners. We recommend to implement the following self-assessment block designed for each unit (see Figure 9) in order to engage students and support their gradual progress.

IV.4. Task-based curricular design modelling and piloting

Teaching English as a foreign language is part of the communicative competences' integration programme. The programme teaches students to acquire skills that assist them to be competent in multi-professional skills. The skills acquired after completion of the programme are diverse with the inclusion of communicative orientation of training. Pillars of learning is achieved through the learning of English since it is a pathway for students to acquire communicative knowledge and skills to be used in a different profession.

The following stage on piloting communicative language competences integration performed in close cooperation with Professor Parvina Islamova (Tajik State University of Commerce) includes course details as well as its goals, training setting and learning outcomes linked to competence achievement. The future profession, in this case, is accounting and audit. Professional accountant learning different types of speech skills such as listening, speaking, reading, writing and mediation improve the chances of being a qualified professional in the job market. During the program period, students will get an opportunity to form communication skills. The component of communication skills is the ability of students to communicate with classmates, therefore, enhancing productive learning.

Forming and refining their communication skills is the first objective of this course. Communication skills are the basics for students for them to be best positioned in understanding and factually synthesizing information. Communication skills go beyond the basics needs putting students in a good state for them to effectively develop and justify points. Point justification abilities are made possible through mastery of speech and writing. Practicing communication relies on the text as a basic tool. The changing global trends put English as the leading foreign language to connect people. Refined communication skills put a student in a good position to be accepted by most employers. The English language through mastery of communication skills makes it possible for students to enhance other complementing transversal skills. The English language is, therefore, the backbone of ensuring that students acquire other transversal competences with ease.

The lesson was conducted using unit 3 of the dossier called “On a business trip” in the group of a specialty “Accounting and audit” 13 participants, aged around 18-19. In words of Parvina Islamova, “We have got a theme about a business trip, and I wanted to test my students with the use of this book, but I have known that the level of English is higher than they have. I have found this book interesting, however my students would have had a better experience if they were B1-B2 level. My students are so ambitious they want to improve their knowledge, and I think it was a good idea to change our textbook”. The practical process also proved that knowledge acquired on the English language [partially acquired LC-01, LC-02, LC-03 and LC-04] was a factor when it

came to carrying out of experiments and analysis of data. The interpretation of data is essential in concluding competence achievement”.

V. CONCLUSIONS

This assessment of the importance of communicative competences in higher institutions demonstrates the type of skills looked for by institutions as well as for clarity in their definition. In terms of limitation, this study aims to critically assess the relevance of communicative competence in non-language degrees to increase the employability of students in the workplaces and delivery of the expected outcomes. We hope people that will use this study will be able to gain an insight into the importance of the subject both in the class and outside their classrooms.

The study results presented in this article show that the authors attached importance to the development of a reliable study methodology. Moreover, a number of methodological procedures for addressing university students’ thematic interests and connecting them to curricular objectives helped adopt innovative competence-based approaches. This allowed scholars to answer research questions in the following way: RQ (i) the combination of procedures that ensured study cohesion was based on needs survey, dossier and assessment suggestions as well as project piloting; RQ (ii) as mentioned before, students’ needs detected by needs analysis are the core element of motivation towards competence training; RQ (iii) adapted competence assessment merging a specific scale and self-assessment table can be used for assessing learning results; RQ (iv) piloting results were quite promising even though some adjustments should be done.

The main result that is obtained in the research is a course design proposal that allows to integrate the personalised learning elements to complete successfully the training process through the implementation of communicative competences. One of the most remarkable practical implications of this study is that the proposed dossier allows a structural and clear development of communicative competences and their measurement. Thus, it helps learners to have a robust vision of his/her learning processes. The implementation of communicative competences is usually presented in the context of a subject but there is no concrete didactic material which embraces and

works those competences gradually and systematically through cross-curricular competences.

In summary, learning of L2 can be challenging, but it can also be exciting if done with a positive attitude (Redecker et al. 2011). It entails the involvement of different people to make sure that students can succeed in their education. These people include, but not limited to, educators, graduates and employers.

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APPENDIX I

Table 2. Adapted communicative competences assessment scale

	Competence	Markers/ descriptors	Likert Scale (1-5)
Communicative competences	LC-01 Listening, B2	Can understand the main ideas of propositionally and linguistically complex speech. Can follow extended speech and complex lines of argument.	
	LC-02 Speaking, B2	Can give clear, systematically developed descriptions and presentations, with appropriate highlighting of significant points, and relevant supporting detail. Can give clear, detailed descriptions and presentations on a wide range of subjects. Can communicate detailed information reliably. Can give a clear, detailed description of how to carry out a procedure. Can interact with a degree of fluency and spontaneity.	
	LC-03 Reading, B2	Can read with a large degree of independence. Can scan quickly through long and complex texts, locating relevant details. Can quickly identify the content and relevance of news items, articles and reports on a wide range of professional topics, deciding whether closer study is worthwhile.	
	LC-04 Writing	Can write clear, detailed texts on a variety of subjects related to his/her field of interest, synthesising and evaluating information and arguments from a number of sources.	
	LC-05 Mediation, B2	Can convey detailed information and arguments reliably, e.g. the significant point(s) contained in complex but well-structured, texts within my fields of professional, academic and personal interest. Can encourage participation and pose questions that invite reactions from other group members' perspectives or ask people to expand on their thinking and clarify their opinions.	
	LC-06 Pluricultural and plurilingual competence, B2	Can describe and evaluate the viewpoints and practices of his/her own and other social groups, showing awareness of the implicit values on which judgments and prejudices are frequently based. Can alternate between languages in his/her plurilingual repertoire in order to communicate specialised information and issues on a subject in his field of interest to different interlocutors.	
	LC-07 Online training competence, B2	Can participate actively in an online discussion. Can engage in online exchanges between several participants. Can recognise misunderstandings and disagreements that arise in an online interaction and can deal with them.	
Comments and feedback			

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Exploring the Vocabulary Learning Strategies of Italian Learners of English

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ABSTRACT

In this paper, a think-aloud protocol is used to explore the vocabulary learning strategies of ten adult learners of English at a university in the north of Italy. The focus is on discovering the types of techniques that are actually used by learners while performing a deliberate vocabulary learning task. As well as providing details about the strategy use of each participant, the investigation considered the strategies used by more and less successful EFL learners. In general, less attention was awarded to techniques involving deeper mental elaboration, such as complex guessing for meaning or the use of mnemonic techniques, in favour of strategies requiring less mental effort. There was also less emphasis on mechanical repetition than in many previous studies on the topic.

Keywords: *vocabulary learning strategies, exploratory, think-aloud, strategy sequences, frequency of use*

I. INTRODUCTION

The present study is an in-depth exploration of the vocabulary learning strategies of a group of Italian adult learners of English as a foreign language. Information is provided about the types of strategies used and how frequently they are employed on a deliberate vocabulary learning task. The investigation distinguishes between individuals in terms of their strategic behaviour and also considers the relationship between language learning success and strategy use. The hope is that the findings will help inform how English vocabulary is presented and taught to Italian learners of English in the classroom.

Due to the longevity of language learning strategy research, and its sub-set comprising vocabulary learning strategies, which emerged over forty years ago, it is necessary to begin by establishing why this investigation is of value. This is pertinent, given that the traditional approach to such research, which targeted the techniques that learners apply, has been the subject of criticism. Essentially, rather than focus exclusively on the types of strategies used by learners, some researchers (Dörnyei 2005, Tseng et al. 2006, Tseng

and Schmitt 2008) have called for greater attention to be devoted to exploring the forces driving our learning behaviour. The consequence of this is that many experts are seemingly less keen now on examining the types of strategies used by learners. Yet, the position adopted here is that there are still valid reasons for persisting with inquiries of observable learner behaviour. Indeed, in Gao's (2007) view, existing models of strategy use and investigations that look at the initial driving forces are not incompatible, as they are measuring the beginning and end-product of the same event. Rose (2012) also maintains that it is possible to study strategic learning both in terms of what drives a learner to behave in a certain way, but also in terms of the cognitive and behavioural strategies they employ (Rose 2012: 97). More recently, Oxford (2017) and Rose et al. (2018) both assert that investigating learning strategies is still beneficial, notwithstanding recent developments in the field of strategy research. Such views helped establish the theoretical basis of the present study, which was also reinforced by Pawlak and Oxford's (2018: 529) assertion that it is difficult to imagine how any kind of learning, including foreign language learning, could be successfully managed without skilled use of strategies. Consequently, it is anticipated that this exploration of strategy use will prove beneficial, since it presents detailed information about the types of strategies employed and indicates how learners differ in terms of their use.

Since the goal is to present a thorough exploration of strategy use, the emphasis is placed on qualitative rather than quantitative research methods. For data collection, a think-aloud protocol is utilised to tap into the thoughts and actions of a group of learners as they attempt to determine and consolidate ten unknown lexical items. This methodological decision is supported by Takeuchi (2019: 16) who contends that research on language learning strategies should "observe the trend in the direction of qualitative data collection methodologies including narratives, interviews, diaries, journals, portfolios, and think-aloud protocols". Besides functioning as a useful tool for uncovering the strategic moves made by individuals, a think-aloud protocol also enables one to gain some valuable insight into how a group of students differ while undertaking a specific learning task. This is relevant, as research has indicated that a variety of factors may influence the types of learning strategies that are used (Oxford 1990, Macaro 2006). These include, amongst others, age, gender, attitude, motivation, aptitude, learning stage, learning styles, individual differences, cultural differences,

beliefs about language learning, and language proficiency. In this instance, the objective is to contribute to our understanding of the influence of language learning success on strategy use. Though this topic has received research interest, there exists a paucity of research involving Italian adult learners of English. Consequently, rather than select participants randomly for the think-aloud study, the sample comprises an assortment of learners who were either successful or unsuccessful in their most recent university English examination.

The study focuses on:

- Identifying the strategies used by Italian learners of English while discovering and consolidating unknown English words.
- Exploring the relationship between language learning success and strategy use.

II. CONTEXT OF THE STUDY

The motivation to perform the study came while I was teaching English to a group of undergraduate students at a university in the north of Italy. All members of the class had been unsuccessful in the previous end-of-year written English language exam. The language class, in question, is termed a *recupero* course, and functions as a remedial programme for students who need to improve their level of performance in the end-of-year written exam in English. Hence, the course is very exam-oriented and contains fewer students than traditional English language courses at the university. In class, it struck me how passive many individuals were in terms of how they approached various learning tasks, with many showing a degree of reluctance to engage actively in language learning. With this in mind, I chose to focus exclusively on vocabulary learning, with the aim of learning more about the kinds of strategies used by Italian learners of English to discover and consolidate lexical meaning in English. In so doing, I hoped some useful data would emerge surrounding the strategic behaviour of more and less successful learners.

By contextualising the investigation within a third-level institution in the north of Italy, the findings can be examined alongside studies with participants from different backgrounds. This is recommended by Takeuchi (2019), who claims that future studies

should focus on a specific population in a specific task-setting and context, as strategy use depends to a large extent on learners, tasks, and contexts. Consequently, rather than try to uncover general patterns in the population, which has been the focus of a large proportion of previous research on strategies, the goal here is to collect rich data about strategy use from learners as they actively engage in a deliberate vocabulary learning task. Pawlak and Oxford (2018) highlight the value of doing so, since understanding how strategies are used in specific learning tasks or the different phases of tasks remains a challenge for researchers.

III. VOCABULARY LEARNING STRATEGIES

While there has been an interest in language learning strategies for several decades, many investigations have focused broadly on language learning as a whole and tended to ignore vocabulary learning strategies (Schmitt 1997). Readers are invited to refer to Cohen and Macaro (2007) for a thorough overview of language learning strategy research, plus a 2018 special issue of *Studies in Second Language Learning and Teaching* that explores past research on the topic and recommends avenues for future research. However, a body of research devoted specifically to vocabulary learning strategies now exists, which has addressed a variety of issues over the years (see Pavičić Takač 2008 for a detailed survey of vocabulary learning strategy research).

In terms of focus, research has been done on various topics, including classifying vocabulary learning strategies (Stoffer 1995, Schmitt 1997, Gu 2003, Zhang and Li 2011), examining frequency of strategy use (Cohen and Aphek 1981, Gu and Johnson 1996, Lawson and Hogben 1996, Barcroft 2009; O'Malley et al. 1985a, Schmitt 1997, Schmitt and Schmitt 1993, Fan 2003, Kafipour et al. 2011, Arjomand and Sharififar 2011, Rabadi 2016), and considering the effect of strategies on vocabulary retention (Atkinson and Raugh 1975, Brown and Perry 1991, Rodríguez and Sadowki 2000, Zahedi 2012, Wei 2015). On top of that, many studies have been conducted on learners from different cultural backgrounds and at various stages of education. In the last decade alone, numerous publications have appeared concerning the vocabulary learning strategies of English learners from many countries, including Malaysia (Asgari and Ghazali 2011), Turkey (Çelik and Toptaş 2010, Kirmizi and Topcu 2014, Yigit and

Aykul 2018), Iran (Hamzah et al. 2009, Davoudi and Chavosh 2016), Indonesia (Bakti 2018, Noprianto and Purnawarman 2019), Poland (Nosidlak 2013), Croatia (Roguli and Čizmić 2018), Romania (Cusen 2009) and China (Zou and Zhou 2017). The hope is that this study of Italian learners of English will contribute to the field by providing another contextualized investigation of strategy use.

Several key investigations of vocabulary learning strategies by prominent experts in the field are outlined below. Quite a few of them were published more than two decades ago, when interest in strategy research was at its peak. Yet, due to the nature of this study, which explores the types of strategies actually used, how learners differ in terms of strategy use, and the relationship between learning success and strategy use, they remain relevant and will be referred to while discussing the findings.

III.1. Types and frequency of vocabulary learning strategies

Gu and Johnson (1996) surveyed the vocabulary learning behaviour of 850 Chinese university learners of English. Participants reported greater use of meaning-oriented strategies than rote-learning strategies. It also emerged that “contextualised guessing, skilful use of dictionaries for learning purposes (as opposed to looking up for comprehension only), note-taking, paying attention to word formation, contextual encoding, and intentional activation of new words all positively correlated” (Gu and Johnson 1996: 668) with vocabulary size. Conversely, visual repetition was the strongest negative predictor of learning outcome. In another survey, Schmitt and Schmitt (1993) asked 600 Japanese learners of English to indicate whether they used a particular strategy or not, as well as whether they thought it was helpful or not. There was a strong preference for a bilingual dictionary, while most respondents also guessed for meaning frequently and asked classmates for help with deciphering lexical meaning. As for consolidation strategies, some form of repetition was the most popular strategy, while focusing on a word’s spelling or connecting a word with synonyms or antonyms were also common. In terms of helpfulness, a bilingual dictionary was considered most beneficial, while asking a teacher for a paraphrase or synonym also ranked highly. Forming an image of a word, or using the Keyword Method, were both considered unhelpful.

While obtaining perceptions of strategy use lends itself to descriptive analyses, Lawson and Hogben (1996) believed more could be understood about learner behaviour by exploring the kinds of strategies they actually use rather than those they think they use. To do so, they adopted a think-aloud protocol to explore the behaviour of 15 foreign language learners as they attempted to acquire the meaning of several new words. Their study design proved instrumental when choosing a data collection tool for the present investigation. In terms of findings, the most frequently used strategy involved some form of repetition of words and their meanings. Such findings supported an earlier investigation by O'Malley et al. (1985a), which also highlighted the recurring use of repetition and reported actions requiring active manipulation of information to be far less frequent. In Lawson and Hogben's study, participants largely ignored the physical or grammatical features of words, and overlooked more elaborate acquisition procedures, such as the Keyword Method. Barcroft (2009) expanded on Lawson and Hogben's work by exploring the relationship between strategy use and vocabulary learning performance. With respect to shared features across both studies, three actions emerged: repetition, testing, and mnemonic use. Though such findings attest the value of mechanical strategies to learners, techniques requiring deeper mental elaboration resulted in greater recall of words. This supports an earlier study by Cohen and Aphek (1981), who highlighted the benefit of strategies requiring complex mental elaboration for learning vocabulary.

III.2. The relationship between language learning success and strategy use

Early research on the topic of language learning strategies focused on the topic of what defines a good learner, with Rubin (1975: 42) postulating that "if we knew more about what the 'successful learners' did, we might be able to teach these strategies to poorer learners to enhance their success record" (1975: 42). A study by Ahmed (1989) on vocabulary learning strategy use revealed that good learners are more aware of what they can learn about new words and words' collocation, spelling and context. In contrast, poor learners refuse to use the dictionary and almost always ignore new words. They are generally characterised by their apparent passiveness in learning. Gu (1994) performed an in-depth analysis of the vocabulary learning strategies of a 'good' and

‘poor’ Chinese learners of English. In a similar vein to the present study, a think-aloud protocol was employed to tap into the types of strategies used by learners. Gu reported that the poorer learner used a narrower range of strategies than the good learner and used them ineffectively. In his view, poorer learners need to learn how to monitor and evaluate their strategy use as well as the learning process. Moreover, they need to understand that there is more to learning a language than remembering the target equivalents of all native language words. In an excellent review of research on ‘good’ and ‘poor’ language learners, Griffiths (2008) deals with the issue in view of current thinking in the field and examines the implications for language teaching. With regard to vocabulary size and strategy use, Fan (2003) revealed that learners with a greater knowledge of English vocabulary were more self-initiated, used more sources, and employed guessing and dictionary strategies more often than individuals with lower proficiency, which supports some earlier studies (Ahmed 1989, Barcroft 2009, Gu and Johnson 1996, Lawson and Hogben 1996, Sanaoui 1995). Finally, Teng (2015), in a study of 145 Chinese EFL learners, reported that participants’ scores in strategy use correlated significantly and positively with breadth and depth of vocabulary knowledge.

Against this background, is it reasonable to assume that less successful learners will improve if they pursue the vocabulary learning strategy use of better learners? While this may often be the case, Gu (1994) cautions against doing so, as many less successful learners use a high number of strategies but remain poor learners. Moreover, the literature shows the findings of previous studies often vary in terms of the importance awarded to rote-learning and meaning-oriented strategies. Consequently, investigating actual strategy use may shed light on the priority awarded to such techniques. It may also help explain why less successful Italian EFL learners struggle and what can be done to improve their language learning performance.

IV. PARTICIPANTS

Ten individuals took part in the study (See Table 1 and Table 2). At the time of the investigation, they were all attending the second year of a three-year undergraduate degree programme in foreign languages at a university in the north of Italy. A structured sample was chosen to increase the likelihood of the sample containing a mix of more

and less successful learners of English. Thus, five individuals had all previously failed the end-of-year written examination in English on, at least, three occasions. As a result, they were attending a remedial English language programme, or a *recupero* course as it is defined at the university in question, which prepares students to retake the written exam. Another five individuals were randomly selected from a regular second year course and had not yet attempted the end-of-year exam. As well as selecting the participants from different types of EFL courses, the productive vocabulary knowledge of each learner was also assessed.

To test productive vocabulary knowledge, a paper and pencil version of Lex30 (Meara and Fitzpatrick 2000) was used (researchers can access the Lex30 test at www.lognostics.co.uk/tools/index.htm). This is a tool designed for testing the productive vocabulary of non-native speakers of English. It is a word association task, in which learners are presented with thirty stimulus words, and are required to produce at least three responses to each word. Thus, we are left with a short text generate by each testee, which typically contains about 90 different words. The stimulus words are selected so that they elicit unusual, infrequent words in native speakers. In terms of evaluation, Lex30 awards one point to every response word, which does not appear in the most frequent 1,000 words of English. The assumption is that learners with a lower level of vocabulary knowledge will struggle to produce low frequency responses in this task, and that the presence of low frequency words in a test taker's response set indicates that they have an extended productive vocabulary. The developers of Lex30 claim that the test has considerable potential as a quick productive vocabulary test and can also be successfully used to identify cases where the vocabulary development of learners may be abnormal. The results indicated that the group of learners attending the *recupero* course possessed a lower level of productive vocabulary knowledge than those attending the regular second year course.

Table 1. Participants involved in the study

Participant	1	2	3	4	5
<i>Age</i>	24	22	22	22	22
<i>Gender</i>	F	F	F	F	F
<i>Course study</i>	2nd year <i>recupero</i> EFL	2nd year <i>recupero</i> EFL	2nd year <i>recupero</i> EFL	2nd year <i>recupero</i> EFL	2nd year <i>recupero</i> EFL

	course	course	course	course	course
<i>Score on Lex30</i>	7	28	38	28	38

Table 2. Participants involved in the study

Participant	6	7	8	9	10
<i>Age</i>	19	20	20	20	22
<i>Gender</i>	F	M	F	F	M
<i>Course study</i>	2nd year EFL course	2nd year EFL course	2nd year EFL course	2nd year EFL course	2nd year EFL course
<i>Score on Lex30</i>	45	46	53	54	80

V. METHODOLOGY

The experimental set up is a variation on the work of Lawson and Hogben (1996), who also used a concurrent think-aloud procedure in their investigation of vocabulary learning strategies. As in their study, participants were presented with twelve English sentences, with each sentence containing an unknown word (this will henceforth be referred to as the target word). Their task was to think aloud as they discovered and consolidated the meaning of the words by whichever means they chose. Each learner was instructed to report on the thoughts that were in the focus of their attention, and, were not required to describe or explain what was being done. Unlike in Lawson and Hogben’s study, they were also allowed to use a bilingual and monolingual dictionary.

V.1. Selecting the target words for the think-aloud task

The following criteria were used in the selection of the twelve words. This was partially in keeping with Lawson and Hogben’s (1996) selection criteria, with the main difference being that while they focused exclusively on nouns, my study included other parts of speech.

1. Eight words were nouns, three words were adjectives and one target word was a verb.

2. Each word had to be one for which the students did not know the meaning. This was established prior to commencing the task.
3. Each word had to represent a familiar object, concept or emotion.
4. Three words had to contain suffixes.

To cover the possibility of some words being familiar to participants, some reserve items were selected that also fulfilled the above criteria. If a learner knew the meaning of a word on the standard list, one of the reserve items of the same type would substitute it. The complete list of words is shown below.

Target Words

COT

LATCH

MUZZLE

SHOVEL

REFURBISHMENT

LUMBER

SEASONING

UNDERDOG

GOBSMACKED

BLISSFUL

GUTLESS

GRIEVE

Reserve Target Words

PAVING

PERISHABLE

UNASSAILABLE

LEAFLET

OUTSKIRTS

Each word was presented in context, with each sample sentence selected from the British National Corpus (See Table 3). Every effort was made to check that each sentence provided a clue to the word's meaning.

Table 3. Sentences used in the think-aloud study.

Sentences containing the twelve target words	
1.	GOBSMACKED - The loyal workers were <i>gobsmacked</i> to find two months later their ex-boss had bought all his ex-machinery at an auction for next to nothing and started up in business again under another name in the same building. (Source: Trade Union Annual Congress (1985-1994). Rec. on 6 Jun 1993.
2.	COT - 'I have put your daughter in a <i>cot</i> in your room,' Mrs Barnet continued. (Source: Ruth Appleby. Rhodes, Elvi. London: Corgi Books, 1992, pp. 109-226, 3427 s-units)
3.	REFURBISHMENT - We have undergone in the last year a major <i>refurbishment</i> of all our guest and public rooms and now offer the comforts so necessary for a mini-break. (Source: Short breaks - Brighton and Hove 1992, 829 s-units)
4.	SHOVEL - Tom dug frantically with the <i>shovel</i> , lifting the heavy rain-soaked clods of earth with difficulty. (Source: Saigon. Grey, Anthony. London: Pan Books Ltd, 1983, pp. 9-128. 2513 s-units)
5.	LATCH - I can still remember the click of the <i>latch</i> as she shut the door behind her. (Source: Part of the furniture. Falk, Michael. London: Bellew Pub. Ltd, 1991, pp. 1-146. 3416 s-units)
6.	UNDERDOG - The Welsh team arrived in Edinburgh last night keen to exploit the <i>underdog</i> tag for tomorrow's rugby international at Murrayfield, a ground where they have not won since 1985. (Source: Scotsman. Leisure material, 6963 s-units)
7.	LUMBER - All along the riverbank, for a distance of 200 metres, piles of <i>lumber</i> are burning. (Source: Volcanoes. Francis, Peter. London: Penguin Group, 1979, 1432 s-units)
8.	GRIEVE - Yes, we <i>grieve</i> when tragedy strikes in such awful forms as we have seen recently. (Source: I believe. Carey, George. London: SPCK, 1991, pp. 32-131. 2205 s-units)
9.	SEASONING - There are indeed times when a lemon as a <i>seasoning</i> seems second only in importance to salt. (Source: An omelette and a glass of wine. David, Elizabeth. London: Penguin Group, 1987, pp. 156-274. 1944 s-units)
10.	MUZZLE - But you have to admit, it's for the dog's own protection to wear a <i>muzzle</i> , as they can pick up all sorts of things in the street which can poison them. (Source: Dogs Today. Windsor: Burlington Pub. Ltd, 1992, 1478 s-units)
11.	BLISSFUL - Once the winter rains have passed, Delhi experiences two months of weather so perfect and <i>blissful</i> that they almost compensate for the climatic extremes of the other ten months of the year. (Source: City of djinns. Dalrymple, William. London: HarperCollins, 1993, 2329 s-units)
12.	GUTLESS - I should have had the support of my team but they are <i>gutless</i> . (Source: Today.

11230 s-units)

Additional sentences containing the reserve words

1. PAVING - A short path led along cracked **paving** to a front door with coloured glass set into its wood. (Source: Hide and seek. Potter, Dennis. London: Faber and Faber Ltd, 1990, 2403 s-units).
2. PERISHABLE - Moreover, if the retailer has too much stock of **perishable** goods, items may deteriorate or pass their 'sell by' date before they are sold. (Source: Retailing: a manual for students. Leach, Helen. Oxford: Basil Blackwell Ltd, 1989, pp. 45-160. 3291 s-units).
3. UNASSAILABLE - When, just as Kylie ended her ten-date tour, the UK's top pop magazine Smash Hits held its annual awards ceremony, her position as music's No 1 female star was **unassailable**. (Source: Kylie Minogue: the superstar next door. Stone, Sasha. London: Omnibus Press, 1989, pp. 4-96. 2055 s-units).
4. LEAFLET - Criticism was made of his publicity **leaflet**, which featured a photograph not only of the candidate, but a Family ensemble complete with children. (Source: High risk lives: lesbian and gay politics after the Clause. ed. Lincoln, Paul and Kaufmann, Tara. Bridport, Dorset: Prism Press, 1991, pp. 126-248. 1766 s-units).
5. OUTSKIRTS - He switched the engine on and swung the Audi out of the car-park, down Yorkstrasse towards the **outskirts** of the city. (Source: The Lucy ghosts. Shah, Eddy. London: Corgi Books, 1993, pp. 321-452. 4235 s-units).

V.2. The interviews

Each participant was provided with a sheet of paper, listing the twelve target words, and was asked in English to mark any word whose meaning he/she knew. If any of the words were familiar, the cards for those words were replaced with a card from the reserve set. The objective of the study was explained to the participants, i.e. to obtain some information on ways Italian learners go about learning the meaning of new English words. This was followed by each learner listening to a brief description of the think-aloud protocol, as well as observing the researcher run through the think-aloud method with a practice card. They were told to feel free to use the monolingual and bilingual dictionaries provided as often as they felt necessary. Having completed the demonstration, each learner progressed through the twelve cards featuring the target words. All ten interviews were recorded with the average duration being 46 minutes.

VI. DATA ANALYSIS

The following section describes how the think-aloud data was analysed and coded.

VI.1. Analysis of the recordings and coding of data

The ten recordings were transcribed and analysed for different types of strategic moves. A chart was created for each learner, which included the strategies they used, as well as the sequences in which they were used. Each strategy was coded and assigned to one of five higher-level categories (See Table 4), which was largely based on the procedure used by Lawson and Hogben (1996). A category describing dictionary use was added. The first four categories represented the kinds of actions used to discover the meaning of a new word, while the fifth category described the techniques used to consolidate the meaning of a new word. Categories 1 and 2 involved transformation of the features of the word and/or the meaning, with strategies demanding more complex mental elaboration occupying the former category and those requiring less mental elaboration the latter. Regarding the use of context as a way of providing clues to word meaning, the decision was made to split this strategy between Categories 1 and 2. Hence, more complex speculation on the meaning of a word, using knowledge of other constituents of the sentence, occupied Category 1, while quickly guessing the meaning of a word using English, or providing a translation, fell into Category 2. Translating a sample sentence or producing a literal translation of a target word were viewed as demanding a lower degree of mental elaboration and were, thus, assigned to Category 2. This category also included techniques analysis of physical features of a word, such as its appearance or its sound as a basis for identifying its features. By contrast, the production of synonyms of the target word before consulting a dictionary was viewed as demanding greater mental effort, and, thus, occupied Category 1. Category 3 reflected some form of word feature analysis. This included the analysis of affixes, or other grammatical features of a word, such as its part of speech. Category 4 included strategies employed while consulting a dictionary, while Category 5 represented consolidation strategies based upon note-taking, rehearsal of the word and/or the meaning, or some form of self-testing.

Table 4. Categories of strategies used for coding

1. Complex elaboration (C.E)
<i>Complex use of context:</i> the individual made a serious attempt to derive the target word meaning from the sentence, by referring to the meaning or features of other words in the sentence.

<i>Paraphrase</i> : the individual suggested synonyms of the target word before consulting a dictionary.
2. Simple elaboration (S.E)
<i>Simple use of context</i> : the individual attempted to explain the <i>meaning</i> of the target word (in English or Italian) without making specific reference to any other word(s) in the sentence.
<i>Simple use of context</i> : the individual suggested a possible Italian <i>translation</i> for the target word without making specific reference to any other word(s) in the sentence.
<i>Literal translation</i> : the individual attempted to translate <i>literally</i> the target word into Italian.
<i>Physical appearance</i> : the individual commented on the target word's similarity to a word in the L1 or L2.
<i>Sentence translation</i> : the individual attempted to translate the sample sentence into Italian.
3. Word feature analysis (W.F)
<i>Word classification</i> : the individual commented on the part of speech of the new word.
<i>Use of affixes</i> : the individual used his/her knowledge of prefixes or suffixes.
4. Dictionary use (D.U)
<i>Bilingual dictionary</i> : the individual referred to a bilingual dictionary to find the meaning of the target word or another word in the sentence.
<i>Monolingual dictionary</i> : the individual referred to a monolingual dictionary to find the meaning of the target word or another word in the sentence.
5. Consolidation strategies
<i>Note taking (NT)</i> : the individual took a note of various features of the new word (meaning, translation, pronunciation, grammatical properties, sample sentence, other uses of the word).
<i>Simple word rehearsal (REH)</i> : the individual used repetition, or other kinds of learning strategies, to help remember the meaning of the target word.
<i>Cumulative rehearsal (REH)</i> : the individual not only repeated the word and/or meaning but also returned to previous words and rehearsed these in a sequence.
<i>Self-testing (ST)</i> : the individual engaged in self-testing by covering the Italian/English meaning of the new word and tried to generate the other part of the pair.

VII. FINDINGS

In this section, the strategies used by the group to discover and consolidate the meaning of the lexical items in the vocabulary learning task are discussed (Table 4), with

reference also made to the types of strategies used while consulting dictionaries during the task (See Table 5 and Table 6). This is followed by a description of the strategies employed by each participant. The subsequent discussion section reflects on the strategy use of the sample of learners, and considers the strategy use of those who were described as being less successful learners.

VII.1. The types of strategies used to discover and consolidate lexical meaning

The most popular strategy involved the use of a bilingual dictionary, which was consulted to a greater or lesser extent by all ten individuals. While a monolingual dictionary was used less often, it was still popular with only one participant choosing not to use it. Guessing for meaning through English, or coming up with a translation of a word, were also common. Similarly, sentence translation was prominent, with seven individuals doing so at some point during the task. By contrast, examples of more complex guessing for meaning were less prevalent. With regard to word feature analysis, half of the sample attended to the affixes of several target words, with a similar number focusing on grammatical properties of words. Finally, though the majority of participants commented on a physical similarity between a target word and a known word, only two individuals highlighted synonyms of a word.

There was also variation in terms of the use of consolidation strategies. Repetition, in particular, was less frequent than expected. Indeed, only three participants engaged in simple word repetition, albeit doing so on several occasions. There were instances of cumulative rehearsal, though this was only popular with four individuals. On the other hand, note taking was much more evident, with most learners writing a target word and one, or more, translations of a word. Fewer individuals chose to write the meaning of a word in English, though they did so consistently. In general, the sample failed to take written notes of grammatical or pronunciation features, and they chose not to write an example sentence to help remember a word. Finally, there was only one case of self-testing.

VII.2. The types of strategies used to discover and consolidate lexical meaning

Most participants sought more than one translation of a word in a bilingual dictionary. Many also looked for more than one meaning of a word in a monolingual dictionary, though they did so less frequently. Similarly, their attention was only occasionally drawn to sample sentences in a monolingual and bilingual dictionary. In terms of word feature analysis, while half of the sample attended to grammatical information of, at least, one target word, only three individuals considered pronunciation features. The same number paid attention to different parts of speech of, at least, one target word, or looked for synonyms in a monolingual dictionary. Finally, only two learners searched for further information about a word they found in a dictionary definition (See Table 7).

All ten participants matched a dictionary entry to the context in which a target word was originally used (See Table 8). There was also a strong desire to translate, with most of them trying to guess a translation of a target word found in a monolingual dictionary. Indeed, half of the sample also translated the definition of a word found in a monolingual dictionary. When English was used to guess for meaning, learners were more likely to search for information about a word in a monolingual dictionary. Similarly, after providing synonyms of words, they were more likely to use a monolingual dictionary. On the other hand, upon translating a sentence, a bilingual dictionary was used more often.

Table 5. The types of strategies used by each participant to discover and consolidate lexical meaning

A. Frequency of strategies used to determine lexical meaning											
Strategy	PARTICIPANTS										Total freq. of use
	1	2	3	4	5	6	7	8	9	10	
W.F: Checked the part of speech of the target word	1	1	0	0	4	6	5	0	0	2	19
W.F: Checked the affixes of the target word	1	2	1	0	1	3	0	0	0	1	9
S.E: Tried to translate the sentence into Italian	2	7	2	10	0	2	0	2	2	0	27
S.E: Tried to translate literally the target word	1	0	0	0	0	1	1	0	0	0	3
S.E: Guessed a translation of the word without referring to other items	1	5	0	3	0	3	0	4	1	1	18
S.E: Guessed the meaning of the word without considering other items	1	1	4	4	3	3	2	3	3	5	29
S.E: Commented on the similarity of the	0	1	0	1	1	1	2	0	1	1	8

target word to an L1 or L2 word											
C.E: Guessed the meaning of the word by considering other items in the sentence	0	0	0	0	6	3	2	0	0	3	14
C.E: Suggested possible synonyms of the target word	0	0	1	0	0	0	0	0	0	3	4
D.U: Used a bilingual dictionary to look up the target word	12	11	3	10	4	10	12	10	7	8	87
D.U: Used a bilingual dictionary to look up a non-target word in the sentence	0	3	0	5	0	2	2	2	6	0	20
D.U: Used a monolingual dictionary to look up the target word	7	1	12	5	12	0	6	4	11	11	69
D.U: Used a monolingual dictionary to look up a non-target word in the sentence	0	0	0	1	0	0	0	0	0	0	1
Total frequency of strategy use per student	26	32	23	33	32	32	30	23	25	35	

Table 6. The types of strategies used by each participant to discover and consolidate lexical meaning

B. Strategies used to consolidate lexical meaning											
<i>Strategy</i>	PARTICIPANTS										Total freq. of use
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	
N.T: Wrote the target word and one or more translations in Italian	12	12	1	10	0	12	12	12	11	0	82
N.T: Wrote the target word and its meaning in English	0	0	11	0	12	0	0	0	9	12	32
N.T: Wrote the IPA of the target word	5	0	0	0	0	0	0	0	2	0	7
N.T: Wrote some grammatical information about the target word	2	0	0	0	0	0	0	0	0	0	2
N.T: Wrote a sentence or phrase to help remember the word	4	3	0	0	0	0	1	0	0	0	8
N.T: Wrote a sentence or phrase to help remember a non-target word	0	0	0	0	0	0	0	0	1	0	1
N.T: Wrote information about other uses of the target word	3	0	1	0	0	0	0	0	0	0	4
REH: Simple word rehearsal	5	0	0	0	0	0	0	1	6	0	12
REH: Cumulative rehearsal	0	1	1	0	0	0	0	1	1	0	4
S.T: Self-testing	0	0	0	1	0	0	0	0	0	0	1
Total frequency of use of consolidation strategies	31	16	14	11	12	12	13	14	30	12	

Table 7. Types of dictionary consultation strategies

Strategy	PARTICIPANTS										Tot
	1	2	3	4	5	6	7	8	9	10	
Read more than one <u>translation</u> of a target word in a <i>bilingual</i> dictionary	12	9	2	5	0	10	6	6	5	8	63
Read more than one <u>definition</u> of a target word in a <i>monolingual</i> dictionary	2	0	4	1	6	0	2	0	3	1	19
Read a <u>sample sentence</u> containing a target word in a <i>bilingual</i> dictionary	3	0	1	2	0	1	0	1	2	1	11
Read a <u>sample sentence</u> containing a target word in a <i>monolingual</i> dictionary	0	0	1	3	2	0	0	0	1	1	8
Considered the <i>IPA</i> of a target word	3	0	0	1	0	0	0	0	3	0	7
Considered the <i>grammatical properties</i> of a target word	2	0	0	0	1	1	1	0	1	2	8
Looked up <i>synonyms</i> of a target word	3	0	0	0	1	0	0	0	3	0	7
Looked at the meaning of another <i>part of speech</i> of a target word	0	0	0	0	0	1	0	0	1	2	4
Related the target word's meaning to the <i>context</i> in which a word was originally found	10	4	6	2	10	5	11	3	4	8	63
Guessed an <i>Italian translation of a target word</i> after reading a definition in a monolingual dictionary	0	0	2	2	7	0	3	3	5	3	25
Translated a definition of a target word found in a monolingual dictionary into Italian	0	1	2	1	0	0	1	1	0	0	6
Looked up the meaning of an unknown word found in the definition of a target word in a monolingual dictionary	1	0	0	0	1	0	0	0	0	0	2
Took note of another new word that was of interest	2	0	0	1	1	0	0	0	0	0	4

VII.3. The types of strategies used to discover and consolidate lexical meaning

VII.3.1. Participant 1

This individual actively used a bilingual dictionary to discover word meaning. Her reliance on a bilingual dictionary was shown by the fact that it was consulted thirteen times throughout the task. This feature really distinguished her from the other participants. While a monolingual dictionary was also used, it merely functioned as a tool to consolidate something she had found in a bilingual dictionary. She infrequently guessed for meaning through English or tried to come up with an Italian translation of a word. Similarly, she seldom engaged in word feature analysis. With regard to consolidation, she took a lot of written notes, which included writing the target words, a possible translation of each word, and a sample sentence illustrating the use of several target words. Finally, she engaged in simple word repetition with half of the target words.

VII.3.2. Participants 2 and 4

Both individuals focused heavily on guessing translations of words, as well as making numerous attempts at sentence translation. They also frequently consulted a bilingual dictionary. While participant two only used a monolingual dictionary once, participant four used one regularly to confirm something she had read in a bilingual dictionary. Both learners failed to examine the surrounding words to derive lexical meaning. In terms of consolidation, they took a written note of target words and, at least, one translation of each word. They also employed a vocabulary learning technique, with participant 2 using cumulative rehearsal and participant 4 engaging self-testing.

VII.3.3. Participants 3 and 5

These participants were characterised by their use of English while determining word meaning. Hence, they frequently referred to a monolingual dictionary and guessed for meaning through English. While participant 3 chose not to engage in complex guessing for meaning, participant 5 focused heavily on the surrounding words in several sample sentences before guessing. In terms of consolidation, they both took written notes of target words and the meaning of each word in English.

VII.3.4. Participants 6 and 7

Both individuals awarded a lot of attention to the grammatical properties of words. There were also instances of quick guessing for meaning, plus more complex guessing involving prior knowledge of other sentence components. A bilingual dictionary was consulted frequently to check the meaning of both target and non-target words. On several occasions, participant 7 also made use of a monolingual dictionary. Finally, they took written notes of the meaning of each target word in Italian.

VII.3.5. Participant 8

This individual used both Italian and English frequently to determine lexical meaning. Thus, she combined translation (i.e. guessing a translation of an item, sentence translation, or using a bilingual dictionary) with several strategies involving English (use of a monolingual dictionary and guessing for meaning). With regard to consolidation, she took a note of a translation of each word and engaged in both simple and cumulative rehearsal of words.

VII.3.6. Participant 9

This learner relied heavily on a bilingual and monolingual dictionary to discover meaning. Indeed, she consulted her bilingual dictionary thirteen times and a monolingual dictionary on eleven occasions. Compared with the other participants, she used a monolingual dictionary used more extensively and did so not only to confirm the meaning of a word previously found in a bilingual dictionary. With regard to consolidation, she frequently engaged in repetition, which included both simple repetition of words and cumulative rehearsal of all ten words. Finally, she took many written notes in both Italian and English.

VII.3.7. Participant 10

This individual consistently used both types of dictionary, with a monolingual dictionary being his preferred choice. Indeed, although a bilingual dictionary was used seven times, its use was confined to consolidating the meaning of a word previously sourced in a monolingual dictionary. He guessed for meaning in English six times, as

well as guessing several synonyms of words. He also showed determination to work out the meaning of unfamiliar words through English. Thus, instead of quickly seeking a translation of a word, he generally guessed for meaning before looking for further information in a monolingual dictionary. Upon doing so, he then frequently sought confirmation in a bilingual dictionary. In terms of consolidation, he chose not to focus on rehearsal or self-testing strategies and wrote each target word and its meaning in English.

VIII. DISCUSSION

The principle objective was to investigate the strategies used by a group of ten Italian learners to discover and consolidate the meaning of twelve English words. From the outset, it was hoped the investigation would provide some useful information about the types of strategies that were actually used by Italian learners of English on a deliberate vocabulary learning task. As well as shedding some light on the types of techniques commonly employed, the hope was that more could be learned about the way individuals differ in relation to vocabulary learning behaviour. From this standpoint, a special focus was placed on uncovering details about the relationship between language learning success and strategy use. The above-mentioned points are discussed below, while time is also taken to consider how the results could help inform how English vocabulary is taught to Italian learners of English in the classroom.

- The strategies used by Italian learners of English while discovering and consolidating unknown English words

When faced with the task of determining lexical meaning, many participants chose to translate. This involved either guessing a translation of an English word/phrase or consulting a bilingual dictionary. The desire to translate supports earlier investigations of strategy use by Lawson and Hogben (1996) and Barcroft (2009), which also reported that learners translated items frequently. While the former noted instances of sentence translation, there was no evidence of this in Barcroft's study. In my study, sentence translation was popular with several individuals. Guessing for meaning typically involved learners coming up with a translation or providing a brief description of the

meaning of a word in English. Consequently, there were few instances of the kind of guessing that requires careful examination of contextual clues in a sentence to help derive word meaning. Such findings support Barcroft (2009), who claimed that his participants spent little time examining the sentence context as a means of generating cues for word meaning. In light of this, it is recommended that more needs to be done to teach Italian learners how to use context as a word learning method. This is particularly pertinent, given that guessing for meaning is an important skill for promoting vocabulary development in learners. Moreover, with the swing in language learning research towards producing more active and independent language learners, it makes sense to equip them with the tools that will enable this to happen. Thus, rather than resort to a dictionary or ask a teacher for assistance, learners should be shown how to look out for contextual clues, such as synonyms, antonyms, cognates, definitions, parts of speech, pronunciation clues.

Dictionaries were frequently used throughout the task. While several individuals prioritised a monolingual dictionary, there were more instances of bilingual dictionary use. This confirms earlier studies by Schmitt and Schmitt (1993) and Loucky (2003) who also revealed a preference among students for a bilingual dictionary. This is a cause for concern, as a study by Ali (2012) on dictionaries as learning tools revealed that a monolingual dictionary was more effective than a bilingual dictionary. This is because a monolingual dictionary requires more effort and supplies sufficient contexts in their definitions of new words and expressions. By doing so, they assist learners to learn new words and vocabulary items and to produce them in similar contexts. As expected, the present study also indicated that guessing for meaning and dictionary use are closely related. Thus, those who guessed translations of words or sentences were much more likely to consult a bilingual dictionary. On the other hand, those who used an English medium to guess the meaning of a word were more inclined to access a monolingual dictionary. The findings regarding dictionary use once again highlight the fact that greater attention should be devoted by teachers to contextualised vocabulary learning. Indeed, while consulting a dictionary, few participants paid attention to contextualised sentences or information about grammar, pronunciation, or synonyms. Hence, more could be achieved by showing Italian EFL learners how to use a bilingual and

monolingual dictionary effectively, as well as providing them with information about the benefits that can be derived from learning words in context.

There was also variation in terms of the level of attention devoted to word parts. While several participants ignored word parts almost completely, others actively examined the grammatical and physical form of words to help derive lexical meaning. Hence, unlike Lawson and Hogben's (1996) who reported that participants largely ignored the physical or grammatical features of unknown words, my findings support Schmitt and Schmitt (1993), who highlighted the popularity of this strategy with their learners. From a pedagogical perspective, Schmitt (1997) stresses the importance of teaching word parts to students, as those who are familiar with them can guess meaning faster. As well as focusing on physical components of words, more should be done to direct students towards pronunciation of words. This stems from the fact that little attention was paid to pronunciation features of words in this study. This may be due to a lack of time devoted towards pronunciation by EFL teachers in Italy. According to Harmer (2001), most English language teachers get students to study grammar and vocabulary, yet little attempt is made to teach pronunciation. Gilbert (2008) also argues that teachers often find that they do not have enough time in class to give proper attention to this aspect of English instruction. Considering that pronunciation is a challenging aspect of learning English for Italian learners, teachers should devote more time to teaching this skill. Shooshtari et al. (2013: 463) provide some useful guidelines for teachers about how this may be achieved.

In terms of consolidating lexis, mechanical repetition was less prominent than in some previous studies of vocabulary learning strategies (Lawson and Hogben 1996, O'Malley et al. 1985a, Barcroft 2009). My findings are, thus, more reflective of an earlier investigation by Gu and Johnson (1996) who also reported how respondents generally avoided rote-learning strategies. While the use of repetition as a learning strategy is often overlooked in favour of more meaning-centred techniques, a recent study by Altalhab (2018) on the effects of repetition on vocabulary retention shows that it may be worth spending more time on this strategy, particularly with difficult words or collocations. In terms of the use of mnemonic strategies, Schmitt and Schmitt (1993) reported that their respondents found them unhelpful, while O'Malley et al. (1985a) also described such techniques as being infrequently used. In Lawson and Hogben's (1996)

study, there was no evidence of the Keyword Method, while only a small proportion of learners used mnemonic strategies, which were similar to some component of the Keyword Method. Barcroft (2009) also reported very little evidence of strategies requiring manipulation of information to consolidate lexical meaning. My data largely reflects such studies, with no evidence of the Keyword Method found or, indeed, any form of imagery being used. With regard to self-testing of word meaning, there was only one instance of this learning technique in my study, which contrasts with Lawson and Hogben (1996) and Barcroft (2009) who reported frequent instances of its use in their studies. On the other hand, note taking was very common here, with some individuals writing a translation in Italian, while others took notes exclusively in English. Most learners, however, failed to take note of any features related to pronunciation, grammar or collocation. The popularity of note taking supports a recent study by Boonnoon (2019) who also identified this strategy as one of the most frequently used by respondents.

- Exploring the relationship between language learning success and strategy use.

A good deal of variation was found in terms of the types of strategies used by the learners. Consequently, it was not possible to identify an underlying trend linking them all. Typically, learner differences resulted from either focusing on the use of translation or making use of their English knowledge to determine lexical meaning. Alternatively, several individuals combined translation with other strategies, such as guessing for meaning, analysis of word parts and use of a monolingual dictionary. While it was also impossible to determine a marked difference between the types of strategies used by the five most (1-5) and the five least successful learners (6-10), some features are referred to here. For instance, while several participants sought, once in a while, to translate a sample sentence containing a target word, participants 2, and 4 relied almost exclusively on this strategy with the target words in the learning task. Such determination to translate was not so evident with the other learners. Also, in terms of frequency of strategy use, the individual with the smallest vocabulary size (participant 1) ended up using the most strategies in the vocabulary learning task. In particular, she used an extensive range of strategies while consulting a dictionary and consolidating lexical meaning. This type of strategy use was somewhat unexpected, as research findings often indicates that less successful learners are generally characterised by the limited number

of strategies they employ. Thus, it conflicts with Fan (2003) who revealed that learners with a greater knowledge of English vocabulary employed guessing and dictionary strategies more often than individuals with lower proficiency. It also lends support to Gu's (1994) observation that many less successful learners use a high number of strategies but remain poor learners. Another observation related to participants 3 and 5 who predominantly used a monolingual dictionary, with participant 5 also carefully examining sentence context to help derive meaning. Once again, it was anticipated here that this type of strategy use would typically be associated with more proficient or successful learners.

IX. LIMITATIONS OF THE STUDY

With regard to limitations of the study, it should be noted that research on the validity of think-aloud reports in SLA is only in its infancy stage (Bowles 2010). One of the criticisms of using think-aloud protocols relates to the validity of such reports, with researchers unsure as to whether verbalising while completing a task acts as an additional task and alters cognitive processes rather than providing a true reflection of thoughts. Upon analysing studies that have investigated reactivity in the L2 literature, Bowles (2010) claimed that while thinking aloud only has a small effect on post-task performance, it increases time on a task. Aside from potential issues with the validity of my think-aloud data, another limitation of my think-aloud study may relate to the fact that I failed to specify which language the learners should use while verbalising their thoughts. According to Bowles (2010: 115) not specifying the language(s) of verbalisation introduces variability into the research design of the study and creates a situation in which some participants may think aloud entirely in the L1, while others may force themselves to think aloud entirely in the second language and might therefore be unable to communicate some of their thoughts as effectively as they could in the L1. Finally, a potential pitfall of using think-aloud reports lies in the fact that learners might report what they perceive they ought to know or do while learning new vocabulary in English, what they think ideal learners know and do, and not what they in fact know or do (Ericsson and Simon 1980).

X. CONCLUSION

This study suggests that it is possible to gain a good understanding of Italian EFL learners' use of vocabulary learning strategies by encouraging them to think aloud while performing a deliberate vocabulary learning task. Detailed information about the types of strategies used and their frequency of use were reported and discussed. Moreover, it was possible to identify the types of strategies used by individual learners. Whilst it was not possible to provide clear-cut evidence of major differences in strategy use between more and less successful learners, some differences were revealed. Above all else, the study highlighted the marked variation that exists among a group of Italian learners of English in terms of how they approach the task of vocabulary learning in English. It indicated that while they may differ in terms of the types of strategies they use, the same strategies are often repeatedly employed by an individual with each new word.

It is hoped this information will be of use to teachers when planning vocabulary teaching programmes. They are advised to discover more about the vocabulary learning behaviour of their students, and to identify the types of strategies that are not being used, or not being employed effectively. This information could then be passed on to learners with details about new strategies they could employ to improve their ability to learn words. For instance, it emerged that contextualised guessing for meaning, which involves looking for clues within a sentence, is rarely attempted by most learners. Instead, they prefer to make a quick guess at a translation or to seek help from a bilingual dictionary. It would also be beneficial to educate learners on ways of improving the effectiveness of certain strategies. This could, for example, include showing them how to maximise dictionary use, and informing them about the various merits of each type of dictionary. Similarly, they could be instructed on ways of improving their note taking skills. This study reported that there is often a failure to include useful information about words, with the focus placed exclusively on writing a translation or the meaning of a word in English. In terms of future research, it is felt more could be learned about the topic by analysing some of the underlying driving forces behind learner motivation, such as learner beliefs about vocabulary knowledge and learning, followed by an examination of the relationship between such driving forces and the types of strategies used by learners.

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BOOK REVIEW

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This volume deals with a much-needed topic that, unfortunately, has not attracted enough attention in the domain of language learning research: the adoption of inclusive instructional practices to address diverse students' needs. The authors' backgrounds and professional experiences perfectly embody an essential aspect in this field: it must be undertaken from an interdisciplinary approach. Sally Scott is a senior researcher of the Association on Higher Education and Disability (AHEAD) with extensive experience with diverse students, including campus disability resource offices; Wade Edwards is a professor of French at Longwood University. They co-directed the Project *LINC: Learning in Inclusive Classrooms*, focused on the development and implementation of instructional techniques aimed at creating more inclusive foreign language learning environments in higher education. This project has already proved to be very fruitful (Scott and Edwards 2012, Edwards and Scott 2012, Scott, Hildebrandt and Edwards 2013), with influential results about a variety of domains, ranging from the attitudes of students with special needs towards foreign language learning, to the needs of temporary faculty members that may not be fully aware of the protocols and resources offered by their campuses to address the learning process of students with disabilities. One of its major outcomes is a website full of original and already published documents and resources that serve as an invaluable guide to build an inclusive environment in foreign language instruction. Much of their experience in this project and subsequent spin-off research is effectively integrated in this book.

The volume is structured in six chapters. The first one, “Disability, Student Diversity, and Inclusive Teaching”, describes the general principles of inclusive instruction. To begin with, the authors provide statistical data that show that student diversity is not an exception in today’s universities, but rather the most common scenario. Accordingly, the authors emphasize the importance of transforming our conception of disability. They introduce the notion of *Universal design for instruction* (UDI): inclusive teaching practices should not simply involve creating new materials tailor-made for specific students with special needs when they demand it; on the contrary, teachers should ideally create the same standard materials for all students, trying to make them maximally usable. The nine principles of UDI are then explained and illustrated with frequent situations in foreign language classrooms. It is noteworthy that one of the authors, Sally S. Scott, is a precursor of this approach (McGuire and Scott 2002, Scott, McGuire and Shaw 2003), originally inspired by the concept of universal design in Architecture and Design.

The second chapter, “Setting the Stage for an Inclusive Language Learning Classroom”, examines different aspects of the design and planning of inclusive environments before the beginning of the semester. One of them is classroom layout: the effects of features like the arrangement of desks, lighting or acoustics are sometimes neglected, even if they may pose powerful barriers not only to students with physical disabilities, but also to any of their fellows. The authors are realistic about the capacity of instructors to build canonically inclusive spaces, since they are aware that they might be assigned classrooms with many physical shortcomings that they will not be able to overcome. Anyway, they also show with a case study that a thorough reflection can easily avoid creating challenging classroom setups.

Another aspect is creating and using accessible instructional materials: tips such as providing students with materials in electronic format well in advance can have a very positive effect on the learning experience of many diverse students. The authors also highlight the need for designing an inclusive syllabus by not simply including a disability statement, but also considering a clear, not distracting format that directs attention towards the core information of the course.

Finally, they devote a section to the instructor disposition, “perhaps the most important feature of an inclusive classroom” (2019: 36). They pay special attention to the students’ perspective when teachers are not approachable enough or have wrong expectations about their performance, particularly when their special needs are not visible and might raise unfair suspicion.

The third chapter, “In the Classroom”, analyses how to implement different inclusive instructional strategies during the term. It begins with an overview of the results of a previous project focused on students’ attitudes towards a variety of instructional strategies revealing which ones are widely endorsed by learners. The authors choose three areas likely to create barriers in foreign language classrooms: the extensive use of the target language, group work and group formation and the amount and characteristics of daily assignments.

The fourth chapter, “Assessment of Student Learning”, delves into the topic of evaluation. The first section revisits the general principles of an inclusive framework for assessment. Interestingly, the authors include the distinction between *target skills* (those that teachers wish to evaluate explicitly) and *access skills* (“other non-construct information which act as a barrier to students”, 2019: 70). They also insist on the importance of preventing ‘hidden’ skills from being implicitly assessed. Three main domains are explored: the “complex and multifaceted” (2019: 75) topic of error correction, tips for designing inclusive rubrics, and mechanisms to enhance students’ self-assessment and metacognition.

The structure of the fifth chapter, “Getting Started”, is different: instead of presenting the main facets of inclusivity regarding different aspects of foreign language instruction, it is organised as a guideline that enables each reader to connect the contents and reflections analyzed in the book to the educational setting of his/her own campus. It contains practical tips and lists the steps to be followed. Particularly helpful are a self-check and a textbox proposed by the authors to evaluate one’s implementation of inclusive practices.

Finally, the sixth chapter summarises the main contents of the book. It includes a section of “Frequently Asked Questions” that manages to dispel the doubts and

concerns that some readers may still have when reconsidering their own instructional strategies.

One of the most satisfying characteristics of this volume is that the authors establish a dialogue with readers through direct questions and suggestions that turn the book into a stimulating guideline to be read along with a notebook to respond to the multiple reflections proposed about one's instructional practices and assumptions. This is already anticipated in the preface, where several thought-provoking situations are described involving diverse students' barriers commonly faced by foreign language teachers. The authors succeed in prompting readers to go beyond theoretical generalisations and to fully reconsider their instructional routine, so that they put into practice many of the ideas advanced. In addition, the book contains many insightful case studies and real student comments from previous projects and experiences that create a very vivid atmosphere. Consequently, theory and practice are harmoniously integrated. Moreover, Scott and Edwards are very realistic in their approach to inclusivity: they are fully aware that it is impossible to formulate general tips that will be useful and effective in any context. This is why they accurately show that flexibility and adaptability are two basic skills when teachers try to incorporate inclusive techniques into their courses.

A minor critique would be that the book does not include some specific guidance about how to proceed when some students claim to have special needs that do not seem plausible. In that sense, the authors sometimes adopt a very optimistic tone regarding the proper functioning of the system and it seems that they assume that students will never attempt to be granted some unlawful advantages by claiming that they have special needs. It would have been helpful to include some tips about how to check suspicious cases without generating anxiety in students that are actually diverse.

In conclusion, this book will be interesting and compelling not only for researchers specialized in the field of disability and foreign language learning, but also for many teachers that wish to adopt new inclusive strategies in their courses to foster equitable learning opportunities. Although the book focuses on university settings, many teachers from other instructional contexts will also find many useful ideas.

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BOOK REVIEW

Assistive Technology in Special Education: Resources to Support Literacy, Communication, and Learning Differences

Joan L. Green

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Assistive Technology in Special Education by Joan L. Green (2018) delves into technology, i.e. apps, websites and devices, to boost learning in students with special needs. With the rise of new technologies in the field of education, many students with disabilities are left behind. Thus, this book intends to show how to use those technologies to make learning easier for physically and mentally challenged students to help them overcome learning difficulties and improve their quality of life. Not only does this book suggest cutting-edge technology, but also everyday gadgets and apps which were not originally created with therapy goals in mind, but end up being so if used correctly, along with state-of-the-art solutions.

This book is addressed to teachers, schools, speech-language pathologists, therapists and families who want to maximise the students' learning potential and overcome barriers such as concentration issues, speech impairment or comprehension among others. Although many of the resources found in this book can enhance learning in students with special needs, and in many cases withdraw this support gradually to aid them become independent, learners with no difficulties can find these resources beneficial in their learning process as a route to empowerment in order to become the masters of their own learning and promote autonomous learning. Nevertheless, despite encouraging families to use technologies with challenged students and applauding families who already do so, the support and guidance of professionals is highly recommended throughout the book; what Green strongly endorses is the idea of therapists, families and teachers working in unison to benefit the student.

It cannot be denied that technology has become rather overwhelming in the past decade with the plethora of available resources, i.e. apps and websites, which together with the myriad of different devices at our disposal in the market can make of this advantage, i.e. technology, a cumbersome and time-consuming process in which families and professionals can get lost, and therefore many might regard it as a setback rather than a step forward. In this book, one of Joan L. Green's purposes is to make a selection of the best resources to narrow down all the available apps and sources, a "representative sampling" (2018: 10) as she calls it, classifying them by function in order to help families and professionals filter all the resources at hand.

The book is divided into 15 chapters, the first three of which are dedicated to the introduction of assistive technology and its future in helping students. The following chapters contain more detailed information about improving specific learning skills, closing with a call to a responsible use of the resources in the final chapter. All of these chapters include an enumeration of recommended apps, devices and websites which are accompanied by a short description and review of the product with the main characteristics as well as the operating system it works on and the price, with the intention of helping "readers save time, frustration and money" (2018: 25). In this sense, this book could be used as a resource book for those educators, families and therapists who would like to develop a learner's skill to exploit their potential or cover a specific need.

The book starts with a 'reality check' on the current situation of technology, namely hardware and software, which implies being aware of all the pros and cons it has to offer, as well as the reasons for the author to write a third edition of this book regardless of its transient, thus perishable, nature of which she is aware and is repeatedly mentioned throughout the pages. In the first chapter, Green encourages people to use technology that is no longer expensive and is easily available in order to increase success and independence for people with communicative, learning and cognitive disabilities. She tries to achieve this by answering some of the most frequently asked questions among the teachers' and parents' communities first, guiding the readers through the procedure to be followed should they need to find a solution to a learner's impediment. Along these lines, notwithstanding the existing barriers to technology for

some challenged individuals, the focal point of Chapter 2 is on how beneficial the shift towards technology can be in assisting all students, but especially for those with challenges. The author refers to the advantages, but also to those obstacles and disadvantages technology may still present for students with an impairment or disability, although the advantages clearly outweigh the disadvantages. Chapter 3 reinforces the idea of technology as a means towards independence for individuals with special needs with the sole aim of overcoming the existing hindrance. In this chapter, the author offers some guidance to assist families and professionals with device choice by offering a review of two of the most popular operating systems on mobile devices. The chapter that follows (Chapter 4) focuses on improving verbal expression, namely intelligibility and expressive language, encouraging a diagnosis of the obstacle and offering strategies and useful technology tools to tackle it. Chapter 5 introduces AAC (Augmentative and Alternative Communication), which helps boost communication needs, and offers a list of resources to learn more about AAC as well as apps, devices, and other options to help individuals communicate. The author contrasts former solutions to AAC and the current ones, which oftentimes are already installed on our phones by default, the reader only needs to be creative about how they are applied. Chapter 6 reviews tips, strategy, apps and resources to improve listening skills – i.e. auditory comprehension, processing deficits and receptive language – such as captioning, assistive devices or websites with free listening activities among others. The resources mentioned in this chapter may also result profitable for those students learning English as a second language (ESL). Chapter 7 has to do with reading comprehension, in which the author emphasises tools which are key to developing this skill which is paramount for academic success. The most prominent feature to bolster reading comprehension mentioned throughout the chapter, be it apps or software on other devices, is text-to-speech, although many others are mentioned. Additionally, Chapter 8 unravels ways technology can be used to enhance reading skills in an engaging way, being mobile apps and websites the top suggestions. Chapter 9 deals with improving written expression, and the writer insists on the use of assistive technology to make life easier and to empower the learners in order to show what they know in a different way with the aim of counteracting a challenge. Chapter 10 is also connected to writing skills, although it offers guidance to acquire more essential skills.

It focuses on spelling and how to draw letters correctly at the outset and goes on to more complex aspects like punctuation and sentence-building towards the end of the chapter. Chapter 11 addresses the issue of attention, cognition, and executive function, i.e. how we pay attention, organise, remember and learn effectively and efficiently. The author suggests some technological and non-tech solutions to aid students in their learning by helping them to stay focused (e.g. calendars) and how to use those solutions effectively. Chapter 12 nourishes the idea of using digital resources and mobile phones to support learning new information, yet it encourages the combination of traditional and contemporary approaches to avoid unnecessary digital distractions. Chapter 13 presents everyday tools to enhance organisation and collaboration. In order to help students dodge the unpleasant situation of forgetting homework at home, the writer suggests online storage such as Dropbox or Google Drive which has become commonplace and most students are familiar with them. On the other hand, to foster collaboration among peers chatting tools such as WhatsApp and online collaboration tools like Google Docs are suggested. These are only some of the examples of those mainstream tools students have already been acquainted with that can be used creatively to provide students with special needs with solutions. Chapter 14 supports the use of apps and online programmes to practise cognitive skills and offers a list of those the writer found most effective. However, competition against peers is discouraged, as it can result in demotivation. The purpose of these ‘games’ is to improve the last result and track the student’s progress. Finally, Chapter 15 closes the same way the book opened: with a ‘reality check’. It reminds the reader to teach students to use technology responsibly warning of all the dangers of the Internet, but also of the benefits if used correctly, which at the same time will prepare them for their future, that is, the chapter aims to promote digital citizenship and safety on the net.

All things considered, the book is a fantastic reference book which leads you to think about the students’ needs at all educational stages. It is definitely a helping hand for families but more so for us, teachers, and professionals: an excellent handbook, but above all, it is a stepping stone towards inclusion and accessibility in education.

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